

AD-A174 980

DFVLR/FAR (DEUTSCHE FORSCHUNGS-UND VERSUCHSANSTALT FUER LUFT UND RAUMFAHR.. (U) DEUTSCHE FORSCHUNGS- UND VERSUCHSANSTALT FUER LUFT- UND RAUMF..

1/6

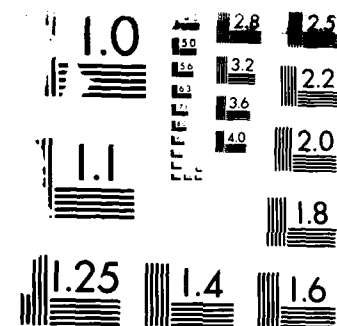
UNCLASSIFIED

M M DOBRZYNSKI ET AL. 1986

F/G 20/1

ML





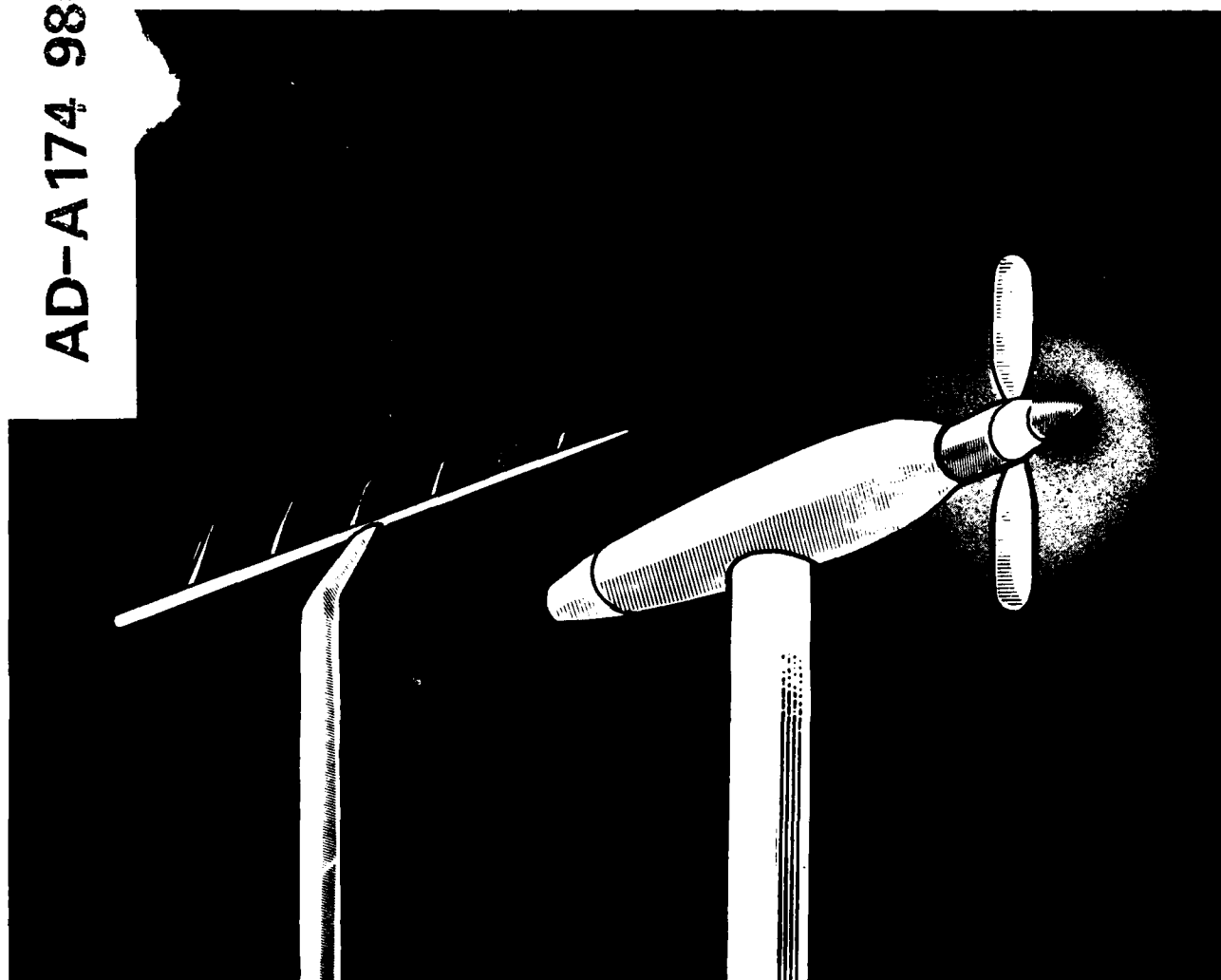
1963 U.S. GOVERNMENT PRINTING OFFICE: 1963 O - 348-100

DFVLR/FAA Propeller Noise Tests in the German-Dutch Wind Tunnel DNW

Appendix IV: The Effect of Propeller Disc-plane Attitude
(Propeller : Thickness 6.4%, Round Tip-shape)

DFVLR-IB 129-86/3
FAA Report No. AEE 86-3

AD-A174 980



Jointly conducted by:



US Department
of Transportation
**Federal Aviation
Administration**

Office of Environment
and Energy



Deutsche Forschungs- und
Versuchsanstalt für
Luft- und Raumfahrt e.V.

Inst. für Entwurfsaerodynamik
Abteilung Technische Akustik

by Werner M. Dobrzynski
Hanno H. Heller
John O. Powers
James E. Densmore

DEC 10 1986

A 86 12 09 114

OTIC FILE COPY

DATA REPORT ON PROPELLER NOISE TESTS

IN THE GERMAN-DUTCH WIND TUNNEL

APPENDIX IV

TEST RESULTS ON THE EFFECT
OF PROPELLER DISC-PLANE ATTITUDE
(PROPELLER 1: THICKNESS 6.4%, ROUND TIP-SHAPE)

by

W. Dobrzynski*, H. Heller*
and
J. Powers**, J. Densmore**

* DFVLR, Flughafen, 3300 Braunschweig, W.-Germany

** FAA, 800 Independence Ave., S.W., Washington, D.C. 20591, USA

Table of Content

1. Introduction
2. Microphone Array
3. Environmental and Operational Test-data
4. Overall Noise Levels from Direct Analog Analysis
5. Acoustic Pressure-time Histories and Narrow-band Spectra
6. Propeller Rotational Harmonic Noise- and Overall Noise Levels
7. Comments on Data Interpretation



Per form 50

A-1

1. Introduction

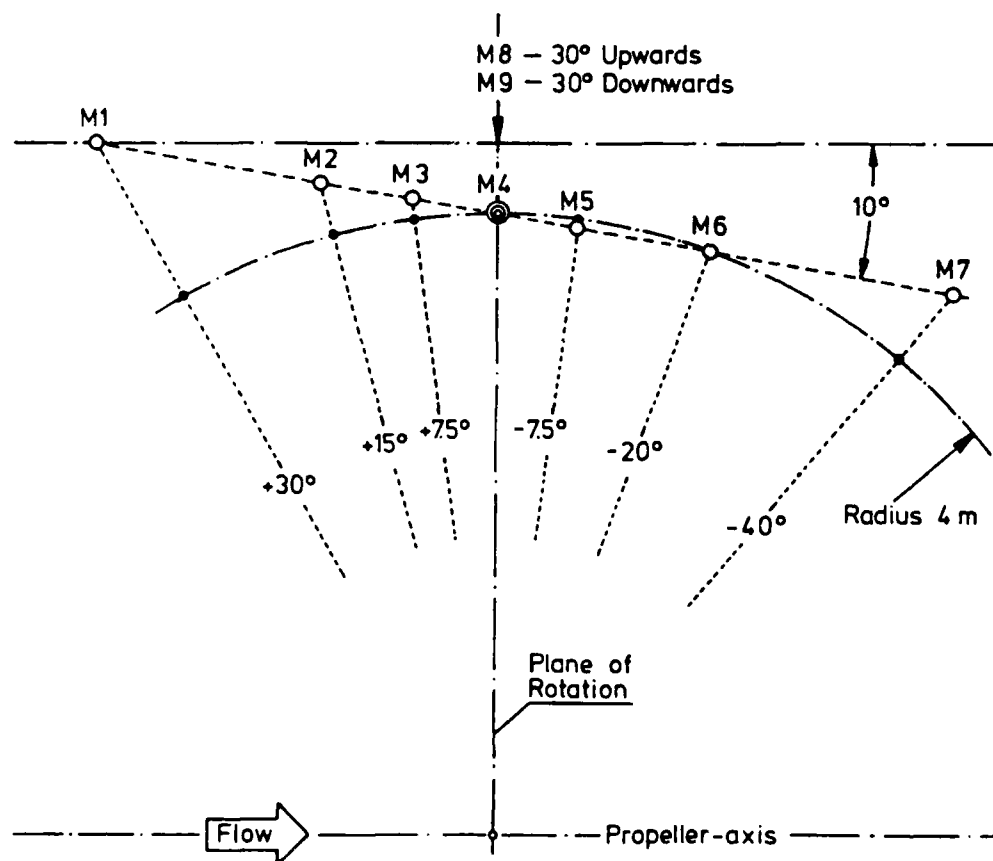
Within a joint effort (and supported by the German Ministry of Research and Technology/BMFT) between the Deutsche Forschungs- und Versuchsanstalt für Luft- und Raumfahrt (DFVLR), the US Federal Aviation Administration (FAA), and the German Ministry of Transportation (BMV), propeller noise tests were conducted in the "Deutsch-Niederländischer Windkanal/German Dutch Wind Tunnel (DNW)" to develop high quality propeller-acoustics data, which could be used by manufacturers for acoustic design purposes, and by researchers to validate established or newly developed theoretical noise prediction methods.

Specifically, the program addressed propeller Mach-number and disc-plane attitude effects as related to noise certification test and evaluation procedures. Changes in Mach-number, as they affect acoustic data adjustments, were explored through independent variation of tunnel flow velocity, propeller rotational speed and ambient air temperature. The tests on the effect of in-flow angle on propeller noise also incorporated the influence of a typical engine nacelle on the flow field and, hence, on the propeller noise.

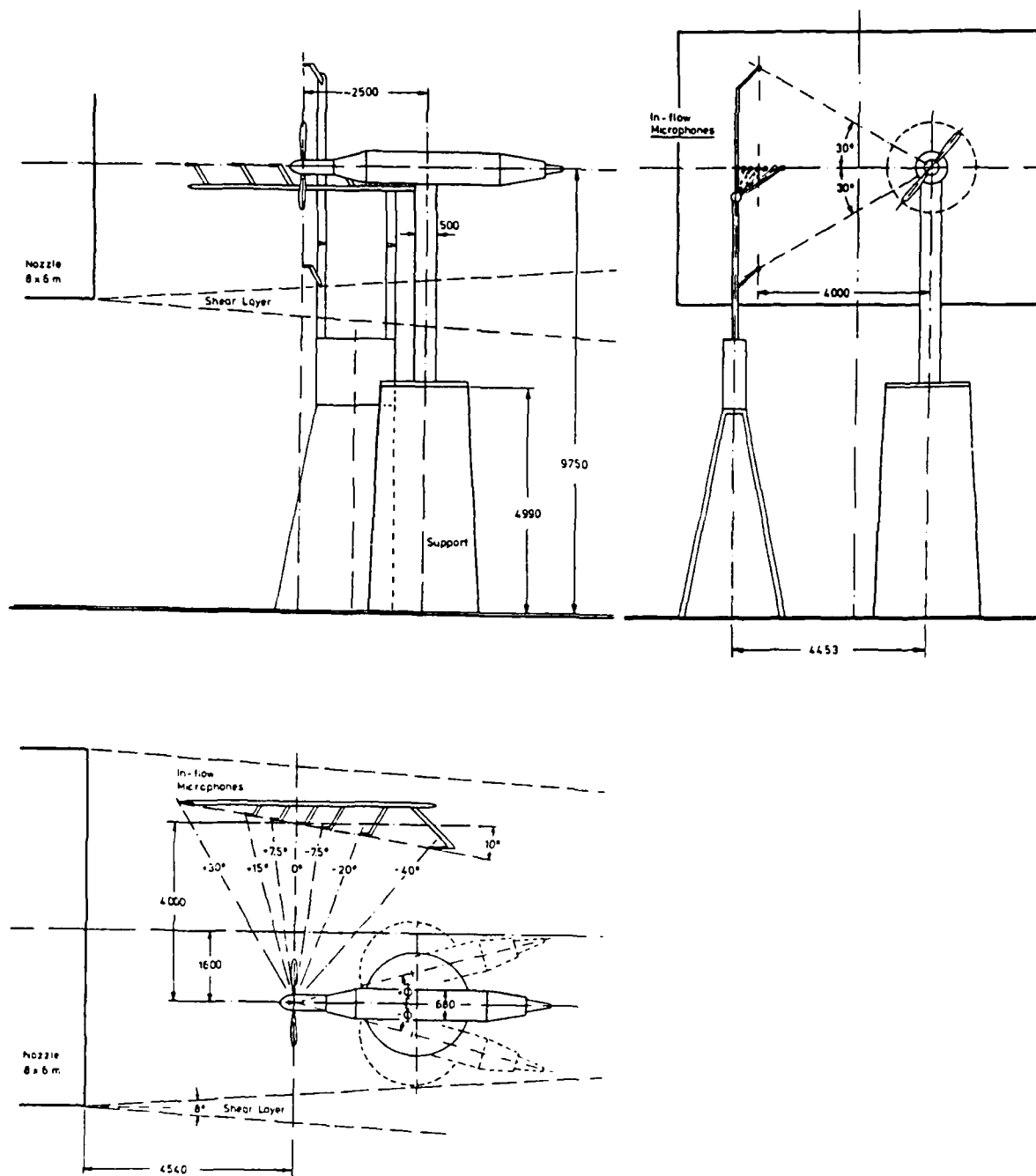
In this Appendix the test results on the effect of propeller disc/plane attitude (Propeller 1: Thickness 6.4%, round tip-shape) are documented in terms of pressure-time histories, narrow-band spectra and unweighted as well as A-weighted overall sound pressure levels, together with supplementary information necessary for further data interpretation. A detailed description of data-acquisition and -reduction techniques is provided by the "Executive Report" to this Appendix.

2. Microphone Array

A total of seven in-flow microphones were positioned in the horizontal plane at different streamwise locations corresponding to particular geometric radiation angles from the propeller center. Two additional microphones were positioned in the plane of rotation (4 m lateral distance to the propeller axis) at angles of ± 30 deg respectively above and below the horizontal plane with reference to the propeller center.



In-flow Microphone Positioning



Schematic Representation of Test-rig Arrangement within the Core-flow Regime of the DNW 8x6m² Open Test Section

3. Environmental and Operational Test-data

In the following table(s) the data-point matrix is documented. These table(s) summarise the as-measured data and characteristic propeller operational parameters as calculated from measured data.

Run No.	Data Point	Pitch Angle	Rot. Speed	Flow Vel.	Power	Thrust	Attitude Angle	Flow Temp.	Flow Pres.	Flow Dens.	Adv. Ratio	Attack Angle	Power Coef.	Thrust Coef.	Hel. Machn.
		deg	RPM	m/s	kW	Newton	deg	Kelvin	Pascal	kg/cm	-	deg	-	-	-
151	GN-1	19.9	2100.	51.4	97.0	1515.	-7.4	286.9	100171.	1.214	0.2300	2.847	0.0538	0.0598	0.6751
152	GN-2	19.9	2400.	51.7	174.7	2623.	-7.4	287.5	100172.	1.211	0.2025	4.793	0.0651	0.0794	0.7664
153	GN-3	19.9	2700.	77.0	149.9	1476.	-7.4	288.4	100171.	1.207	0.2680	0.234	0.0393	0.0354	0.8735
148	GN-4	23.7	1800.	51.2	81.4	1270.	-7.4	287.7	100150.	1.210	0.2673	4.081	0.0719	0.0684	0.5830
149	GN-5	23.7	2100.	51.2	157.7	2363.	-7.4	288.2	100150.	1.208	0.2292	6.710	0.0879	0.0937	0.6735
150	GN-6	23.7	2400.	66.8	212.4	2525.	-7.4	288.2	100160.	1.208	0.2616	4.471	0.0793	0.0766	0.7755
154	LN-1	19.9	2100.	51.6	94.8	1461.	-3.8	288.5	100160.	1.207	0.2309	2.785	0.0529	0.0580	0.6734
155	LN-2	19.9	2400.	51.7	170.4	2569.	-3.8	288.9	100161.	1.205	0.2025	4.793	0.0638	0.0782	0.7645
156	LN-3	19.9	2700.	76.9	145.9	1422.	-3.8	288.9	100201.	1.205	0.2677	0.257	0.0383	0.0342	0.8727
157	LN-4	23.7	1800.	51.4	82.2	1285.	-3.8	286.3	100131.	1.216	0.2684	4.010	0.0723	0.0689	0.5845
158	LN-5	23.7	2100.	51.4	159.0	2368.	-3.8	286.9	100090.	1.213	0.2300	6.647	0.0883	0.0935	0.6751
159	LN-6	23.7	2400.	67.2	211.9	2486.	-3.8	287.2	100155.	1.212	0.2632	4.364	0.0788	0.0752	0.7771
54	BN-4	19.9	2100.	51.2	95.9	1520.	0.0	288.7	99262.	1.194	0.2292	2.910	0.0541	0.0609	0.6729
53	BN-5	19.9	2400.	51.5	171.9	2599.	0.0	289.3	99090.	1.190	0.2017	4.848	0.0652	0.0801	0.7639
51	BN-6	19.9	2700.	77.2	152.1	1500.	0.0	287.0	98625.	1.194	0.2687	0.186	0.0404	0.0364	0.8758
101	CN-3	23.7	1800.	51.5	80.1	1255.	0.0	287.1	100082.	1.212	0.2689	3.975	0.0707	0.0675	0.5838
100	CN-4	23.7	2100.	51.2	157.0	2359.	0.0	286.6	100069.	1.214	0.2292	6.710	0.0871	0.0930	0.6754
98	CN-5	23.7	2400.	67.3	208.9	2525.	0.0	287.0	100125.	1.213	0.2636	4.338	0.0777	0.0763	0.7775
166	FN-1	19.9	2100.	51.6	97.9	1481.	3.6	287.5	100133.	1.211	0.2309	2.785	0.0544	0.0586	0.6746
167	FN-2	19.9	2400.	51.7	174.9	2584.	3.6	288.2	100101.	1.207	0.2025	4.793	0.0653	0.0785	0.7655
168	FN-3	19.9	2700.	77.2	151.6	1432.	3.6	288.2	100152.	1.208	0.2687	0.186	0.0398	0.0343	0.8740
169	FN-4	23.7	1800.	51.0	80.3	1260.	3.6	287.3	100058.	1.211	0.2663	4.152	0.0709	0.0678	0.5832
170	FN-5	23.7	2100.	51.5	155.9	2339.	3.6	288.0	100060.	1.207	0.2305	6.616	0.0869	0.0927	0.6739
171	FN-6	23.7	2400.	67.3	208.6	2481.	3.6	288.4	100063.	1.206	0.2636	4.338	0.0780	0.0754	0.7756
163	EN-1	19.9	2100.	51.4	97.9	1540.	7.3	285.8	100132.	1.218	0.2300	2.847	0.0541	0.0605	0.6764
164	EN-2	19.9	2400.	51.9	176.2	2638.	7.3	286.6	100132.	1.215	0.2033	4.737	0.0654	0.0796	0.7677
165	EN-3	19.9	2700.	77.3	154.9	1530.	7.3	287.9	100162.	1.209	0.2691	0.163	0.0406	0.0366	0.8745
160	EN-4	23.7	1800.	51.4	81.6	1299.	7.3	286.1	100102.	1.217	0.2684	4.010	0.0717	0.0696	0.5847
161	EN-5	23.7	2100.	51.6	158.1	2398.	7.3	286.7	100101.	1.214	0.2309	6.585	0.0877	0.0946	0.6755
162	EN-6	23.7	2400.	67.2	212.4	2569.	7.3	287.1	100146.	1.213	0.2632	4.364	0.0790	0.0777	0.7773

4. Overall Noise Levels from Direct Analog Analysis

The following tables provide unweighted (OASPL) and A-weighted (L_A) overall sound pressure levels from quick-look analog data-analysis of measured data for all data-points and microphone positions respectively. Level-numbers which are identified with an asterix are "disturbed data" and should not be interpreted.

ATTITUDE EFFECT, ROUND-TIP PROP. (1)

DNW PROPELLER NOISE TEST

Run No.	Data Point		In-Flow Noise Level								
			M1	M2	M3	M4	M5	M6	M7	M8	M9
151	GN-1	L -dB(A)	88.4	91.6	94.0	94.5	96.0	94.7	95.4*	99.2	96.7
		OASPL-dB	100.6	106.3*	106.9	108.1	110.2	108.9	104.7	113.2*	109.4
152	GN-2	L -dB(A)	93.6	99.3	102.5	104.3	106.0	104.7	98.2*	104.8	103.5
		OASPL-dB	106.5	110.6*	111.8	113.9	116.2	116.8	114.3*	116.3	113.6
153	GN-3	L -dB(A)	102.7	114.3*	114.3	116.1	119.0	112.8	119.1*	115.5	115.8
		OASPL-dB	114.1*	124.5*	120.5	121.8*	126.9*	120.0	133.6*	126.4	126.0
148	GN-4	L -dB(A)	87.8	88.4	89.0	90.7	94.0	93.0*	93.6*	98.5*	94.5
		OASPL-dB	99.1	104.9*	102.3	104.3	107.5	106.2	102.4	112.9*	109.8
149	GN-5	L -dB(A)	89.5	93.8	95.7	96.8	97.9	97.5	94.2	100.4*	97.5
		OASPL-dB	102.1	110.3*	109.7	110.8	112.4	112.1	110.2	114.2*	111.2
150	GN-6	L -dB(A)	96.4	101.6	103.5	105.1	107.5	105.6	105.9*	107.7*	105.2
		OASPL-dB	109.5	114.7*	113.1	114.8	117.9*	118.1	121.1	119.7*	118.9
154	LN-1	L -dB(A)	88.9	93.4	94.0	95.3	97.1	94.7	91.6*	99.8*	96.7
		OASPL-dB	101.9	107.3*	107.9	108.9	110.7	109.6	106.7	113.4*	110.3
155	LN-2	L -dB(A)	95.6	101.5	104.4	105.6	106.8	105.0	98.5*	105.6	104.4
		OASPL-dB	107.6	112.0	113.7	115.4	117.5	117.7	113.7	116.3*	114.9
156	LN-3	L -dB(A)	105.2	116.2*	116.8	117.9	119.8	112.8	120.3*	116.9	116.9
		OASPL-dB	115.2	125.9*	121.8	123.2*	127.5	120.9	134.0*	126.8*	126.3*
157	LN-4	L -dB(A)	87.8	88.8	89.7	90.9	93.4	92.2*	92.9*	99.8*	95.2
		OASPL-dB	100.8*	104.6*	104.3	105.9	108.5	107.5	107.6*	113.5*	109.7
158	LN-5	L -dB(A)	90.4	94.7	97.2	98.0	99.1	98.1	95.4*	101.6*	98.7
		OASPL-dB	104.5	110.2*	110.9	112.1	113.7	113.8	112.0*	115.3	112.2
159	LN-6	L -dB(A)	98.0	103.5*	105.8	107.2	109.1	107.5	107.0*	108.4	106.8
		OASPL-dB	110.8	116.2*	114.8	116.4	119.4	119.5	120.2*	120.3	120.0
54	BN-4	L -dB(A)	90.2	93.5	94.8	96.0	96.5	--	97.9*	101.0*	97.2
		OASPL-dB	103.6	109.3*	109.2	110.1	111.8	--	111.9*	115.2	111.3
53	BN-5	L -dB(A)	97.3	103.4	106.3	106.5	107.8	--	101.9*	106.4*	106.1
		OASPL-dB	108.6	113.9*	115.4	116.6	118.6	--	117.1*	117.4	116.6
51	BN-6	L -dB(A)	111.1*	119.3*	119.3	119.4	118.4	--	114.5*	117.4	118.9
		OASPL-dB	120.1*	127.6*	123.3	123.9	123.5	--	138.0*	125.2*	126.6
101	CN-3	L -dB(A)	88.9	91.1*	91.6	91.2	92.6	91.5	92.2*	100.0*	94.7
		OASPL-dB	102.1	110.3*	105.7	107.4	109.0	107.5	105.5*	114.5*	110.6
100	CN-4	L -dB(A)	91.7	96.3	97.8	99.1	99.5	98.1	95.1	101.3*	98.9
		OASPL-dB	106.4	111.6*	112.0	113.6	114.9	114.6	113.0	115.9*	113.2
98	CN-5	L -dB(A)	102.1*	105.6	107.9	109.1	109.8	106.7	98.3*	109.4	108.0
		OASPL-dB	112.4	117.1*	116.7	119.0*	120.5	119.8	111.1*	120.9	120.3

*Higher "R" values

Linear- and A-weighted Overall Noise Levels from Analog Data-analysis

ATTITUDE EFFECT, ROUND-TIP PROP. (2)

DNW PROPELLER NOISE TEST

Run No.	Data Point		In-Flow Noise Level								
			M1	M2	M3	M4	M5	M6	M7	M8	M9
166	FN-1	L _A -dB(A)	90.8	95.0	96.5	96.8	97.9	96.1	93.5	101.2*	97.9
		OASPL-dB	104.8	110.7*	110.5	111.8	113.2	112.8	110.2*	114.8*	111.7
167	FN-2	L _A -dB(A)	100.4	105.8	108.0	108.5	109.0	105.6	99.0*	108.2	107.5
		OASPL-dB	110.8	115.4	116.9	118.6	120.2	119.6	114.9	118.5	117.5
168	FN-3	L _A -dB(A)	112.9	122.0	122.1	121.3	121.0	113.9	120.6*	120.0	119.5
		OASPL-dB	119.1	129.2*	125.2	125.3	128.7*	122.9	133.0*	127.5	127.4
169	FN-4	L _A -dB(A)	88.3	90.4*	90.5	92.3	94.1	93.4	93.2*	99.3*	95.4
		OASPL-dB	103.5	107.0*	107.3	108.7	110.7	109.7	106.8	114.9*	110.7
170	FN-5	L _A -dB(A)	92.9	97.0	99.2*	100.5	101.0	99.3	96.5*	102.1*	100.2
		OASPL-dB	107.5	112.5	113.5	114.9	116.6	116.5	114.1	116.7*	114.3
171	FN-6	L _A -dB(A)	102.0	108.1	110.1	110.5	111.4	108.0	105.4*	110.2	109.3
		OASPL-dB	113.0	118.1	118.8	120.3	122.4	121.7	119.8*	121.2	121.2
163	EN-1	L _A -dB(A)	92.0	97.0	97.8	98.6	99.0	96.8	95.5*	101.2*	99.3
		OASPL-dB	106.5	111.6*	112.1	113.4	114.7	114.1	111.0*	115.1*	113.0
164	EN-2	L _A -dB(A)	103.1	108.2	110.0	109.9	110.0	106.1	98.7	108.9	108.4
		OASPL-dB	112.5	116.8	118.9	120.2	121.5	120.6	115.3	119.5	118.7
165	EN-3	L _A -dB(A)	117.3	125.2	124.4	122.8	122.2	114.6	119.0	121.2	121.3
		OASPL-dB	121.7	130.7*	127.2	126.6	129.5	123.9	133.5*	127.8	127.8
160	EN-4	L _A -dB(A)	88.9	91.2	91.8	93.4	94.1	93.7	92.7*	100.1*	96.0
		OASPL-dB	105.0	108.4*	109.3	110.6	112.2	111.5	108.5	115.1	111.8
161	EN-5	L _A -dB(A)	93.9	99.0	100.9	101.7	102.2	99.8	96.1*	102.6	101.2
		OASPL-dB	108.9	113.9	115.3	116.7	118.0	117.7	115.1	117.1	115.4
162	EN-6	L _A -dB(A)	105.2	110.7	112.4	112.1	112.8	109.1	104.1*	111.8	111.0
		OASPL-dB	114.9	120.0	121.0	122.1	123.9	123.1	120.9*	122.3	122.4

*Higher "R" values

Linear- and A-weighted Overall Noise Levels from Analog Data-analysis

5. Acoustic Pressure-time Histories and Narrow-band Spectra

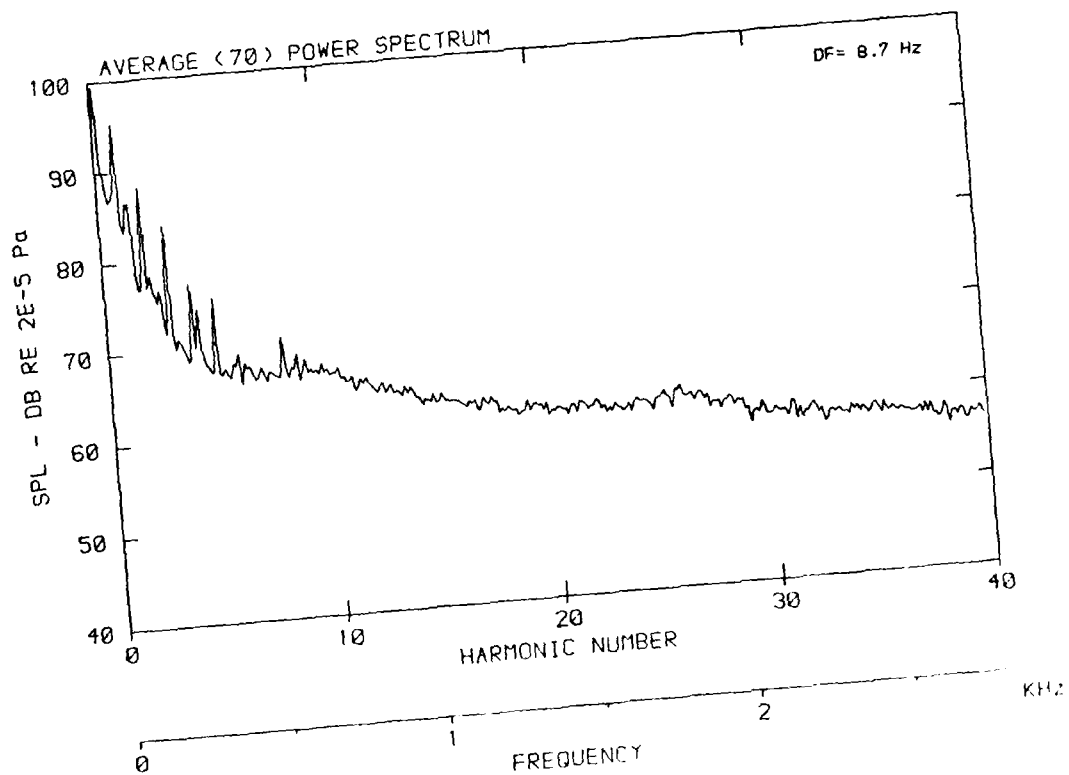
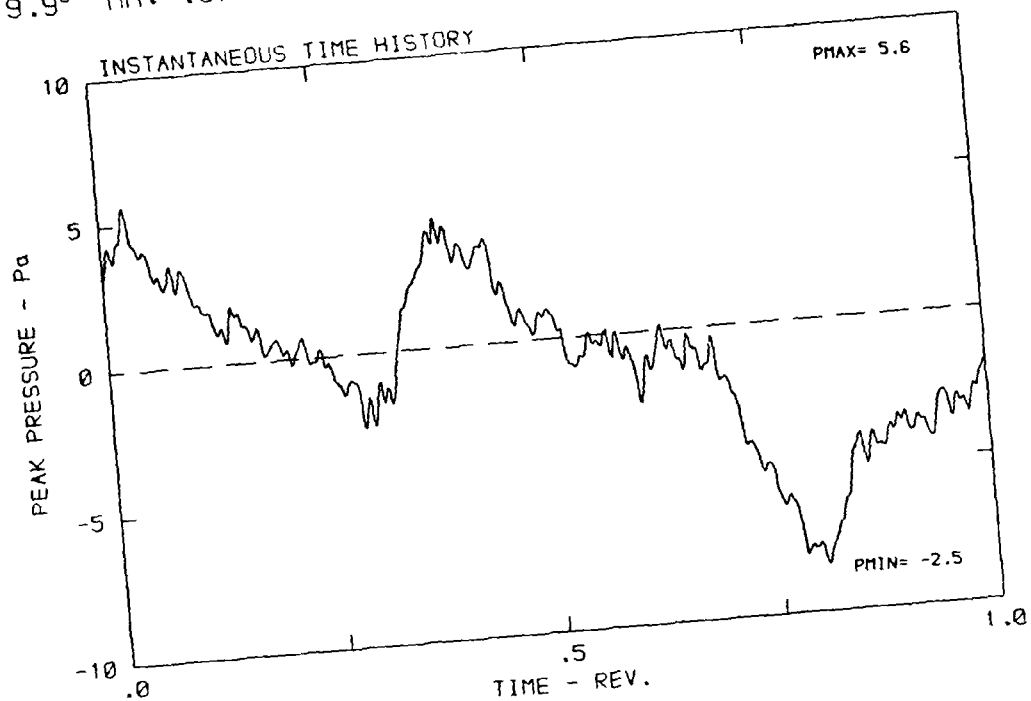
Acoustic data as presented in this section have been derived from a computer analysis of digitized analog tape-readings. For each data-point and microphone position respectively the data were processed and are presented in two different ways:

- a) A single instantaneous pressure-time history is presented and labeled "Instantaneous Time History" together with a power spectrum which had been calculated as an energy average of individual power spectra corresponding to a certain number of instantaneous pressure-time histories. This spectrum is labeled "Average (xx) Power Spectrum". The "xx" in the label denotes the number of time histories averaged in that particular spectrum.
- b) A certain number of instantaneous pressure-time histories is averaged in the time-domain and the resulting pressure averaged time-history is labeled "Average (xx) Time History". The "xx" in the label denotes the number of averaged instantaneous time-histories.

The value of ΔP in the brackets behind this label denotes the maximum peak-to-peak pressure amplitude difference in %, when referenced to the minimum peak-to-peak pressure amplitude difference as detected in the "xx" instantaneous time histories. The magnitude of ΔP can be taken as indicator to judge the stationarity (quality) of the respective data-record. If the value of ΔP is in excess of 496% respective data are marked with a triple star (***) to indicate that the data are heavily distorted.

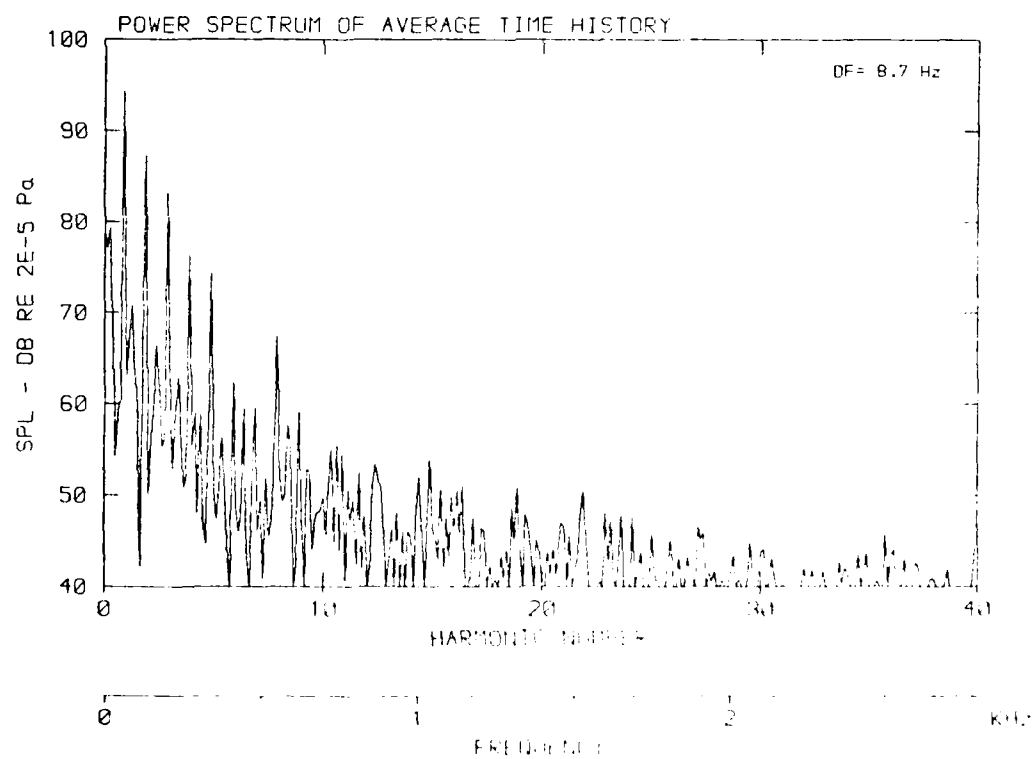
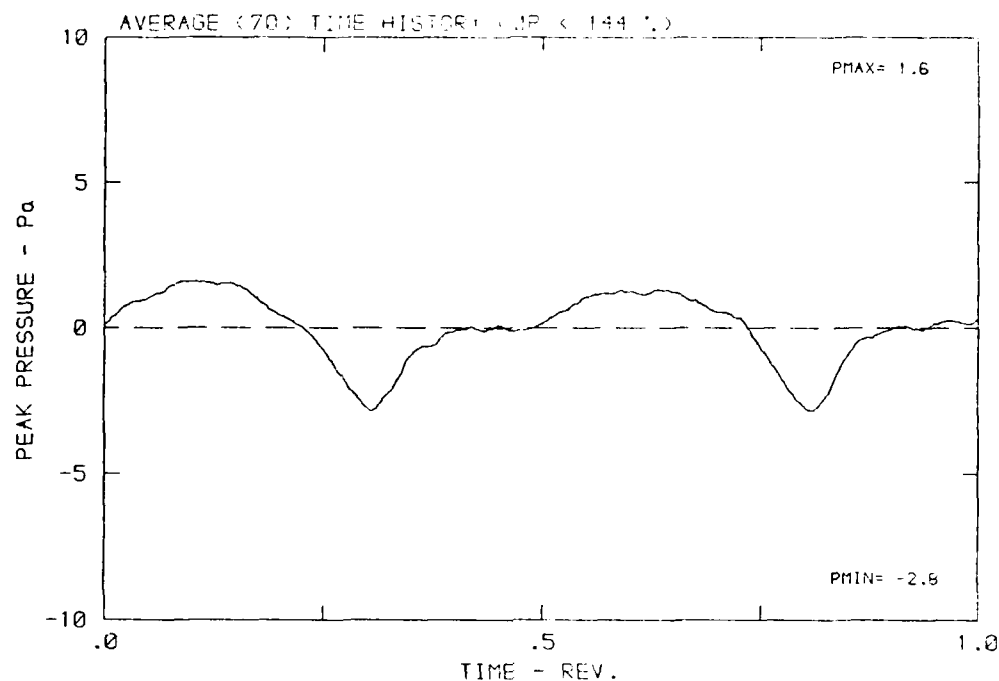
From the pressure-averaged time-history a pressure level spectrum is calculated and labeled "Power Spectrum of Averaged Time History".

DATA POINT: GN-1 RUN: 151 MP: 1
 β : 19.9° MH: .6751 n: 2100 rpm v/u : .230 ϕ : -7.4° T: 265.9 K



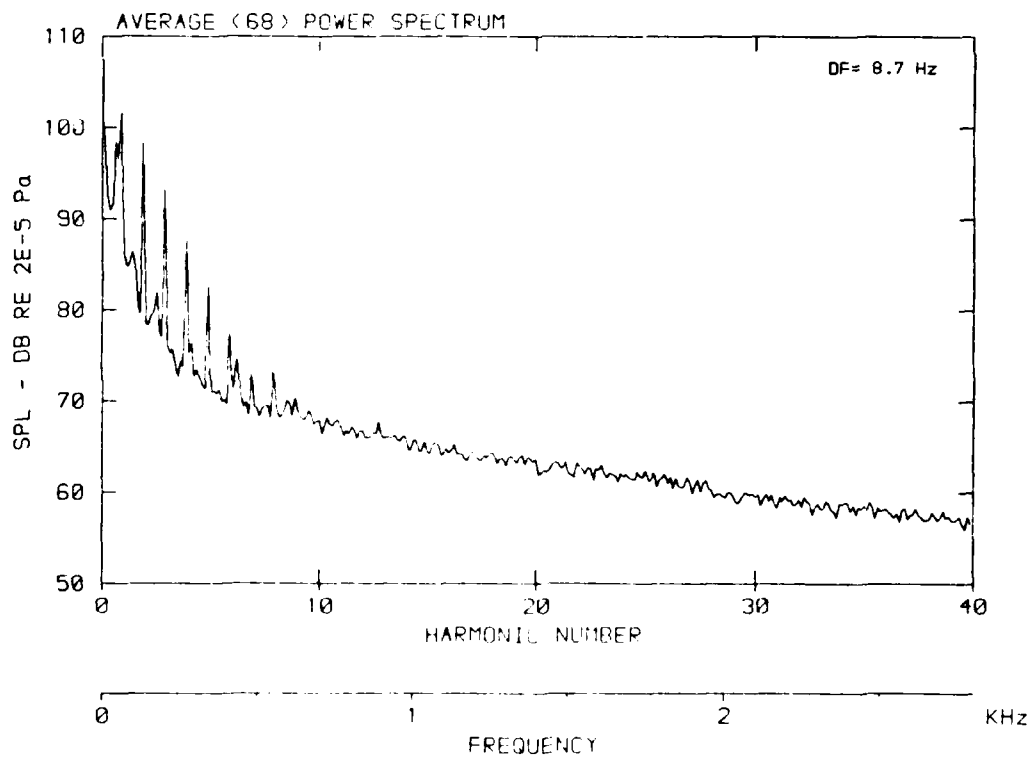
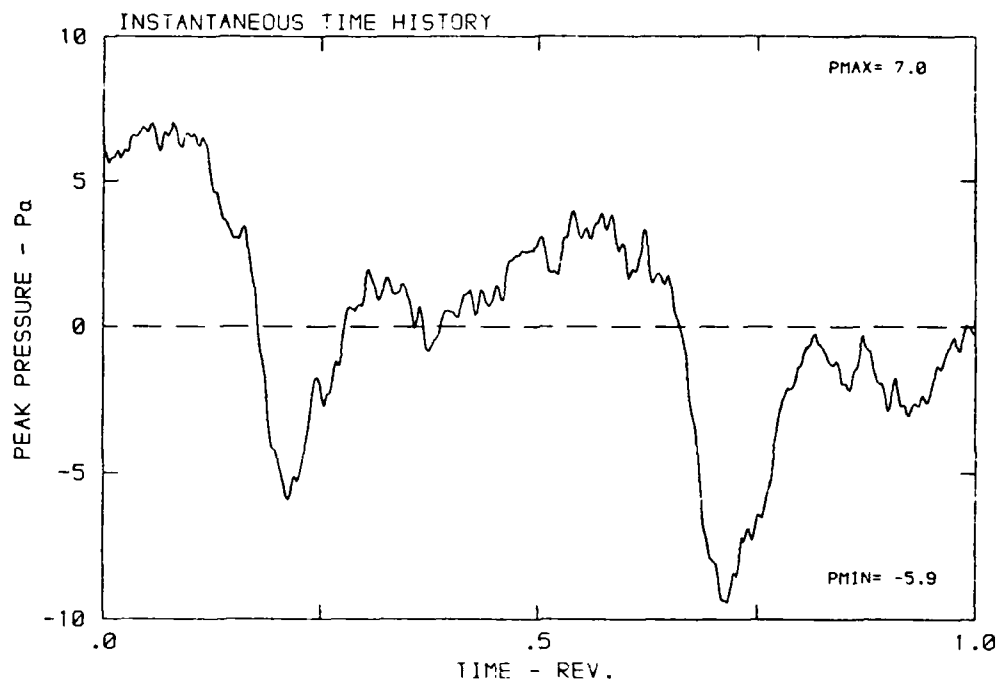
[DATA POINT: 0001] [RUN: 150] [10:]

β : 19.9° MH: .6751 n: 2100 rpm γ : .230 ρ : 17.4° T: 288.9 K



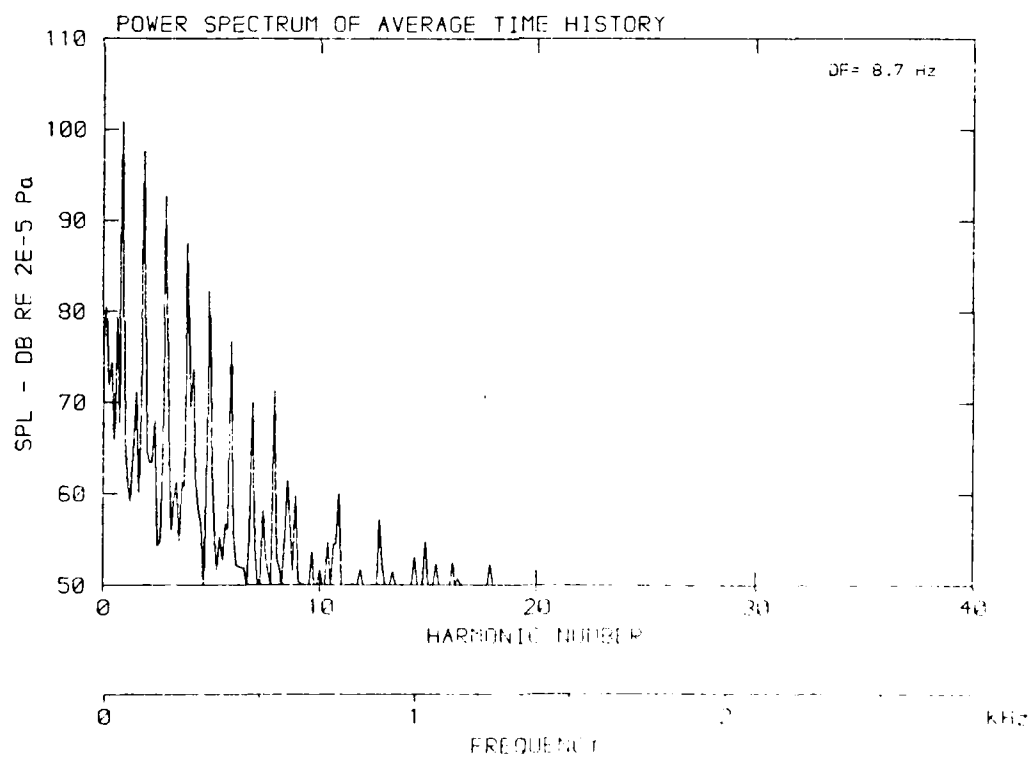
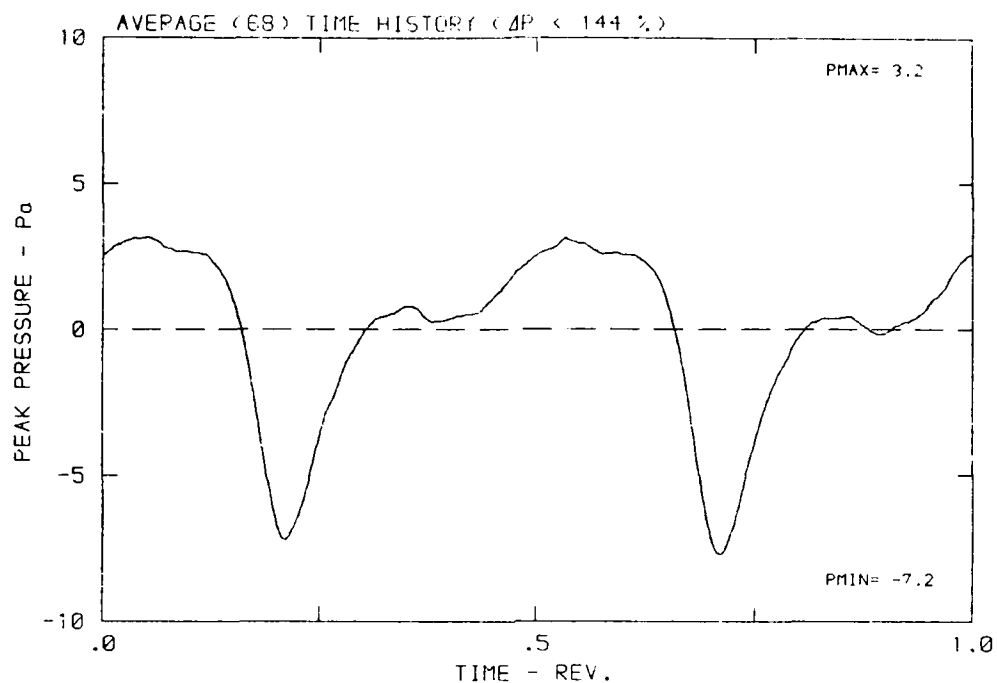
DATA POINT: GN-1 RUN: 151 MP: 2

β : 19.9° MH: .6751 n: 2100 rpm v/u: .230 ϕ : -7.4° T: 286.9 K



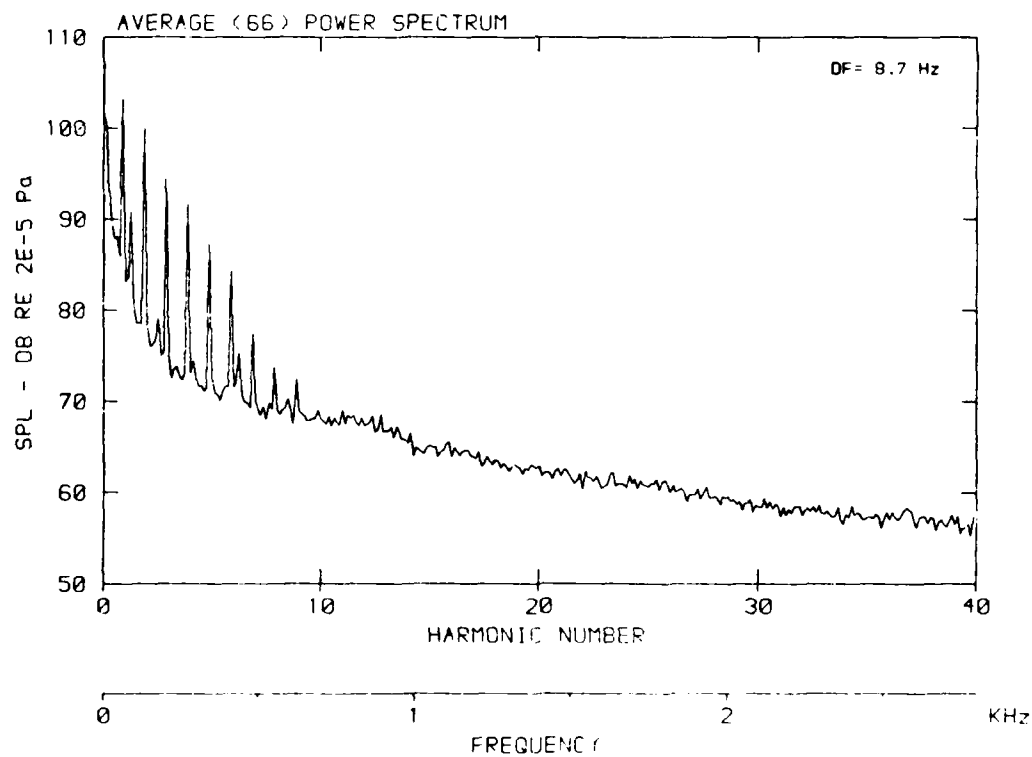
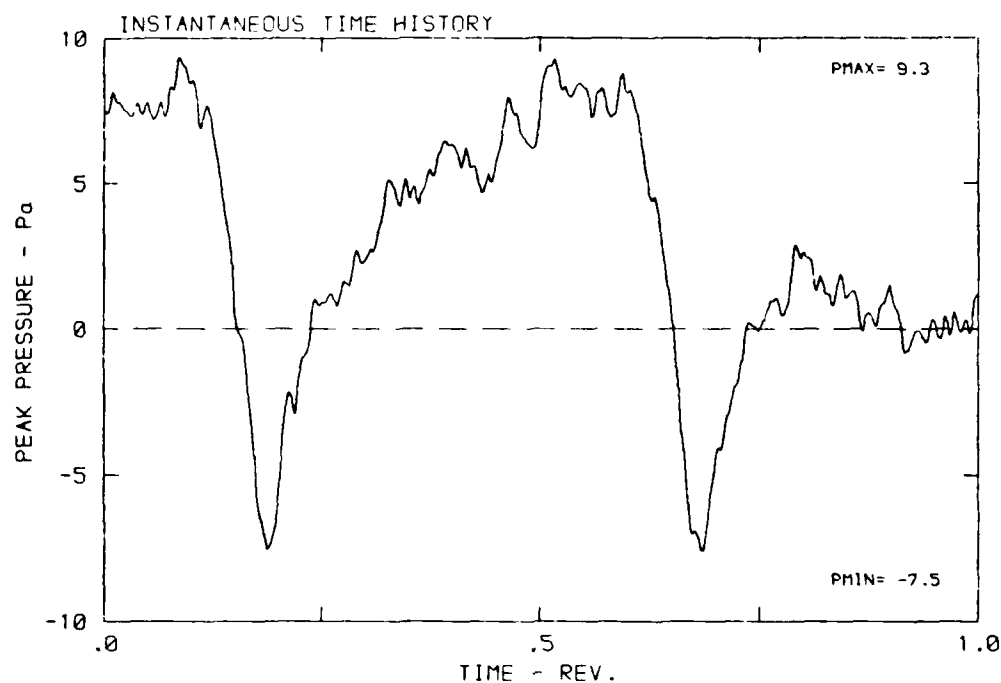
DATA POINT: GN-1 RUN: 151 MF: 2

β : 19.9° MH: .6751 n: 2100 rpm v/u : .230 ϕ : -7.4° T: 286.9 K



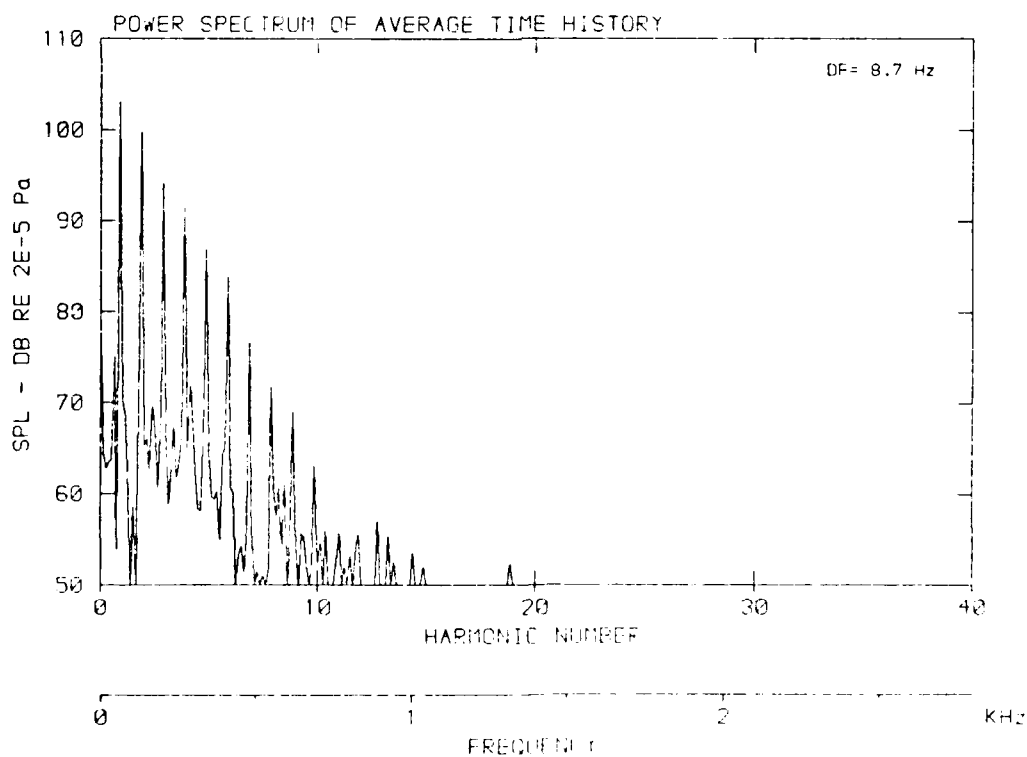
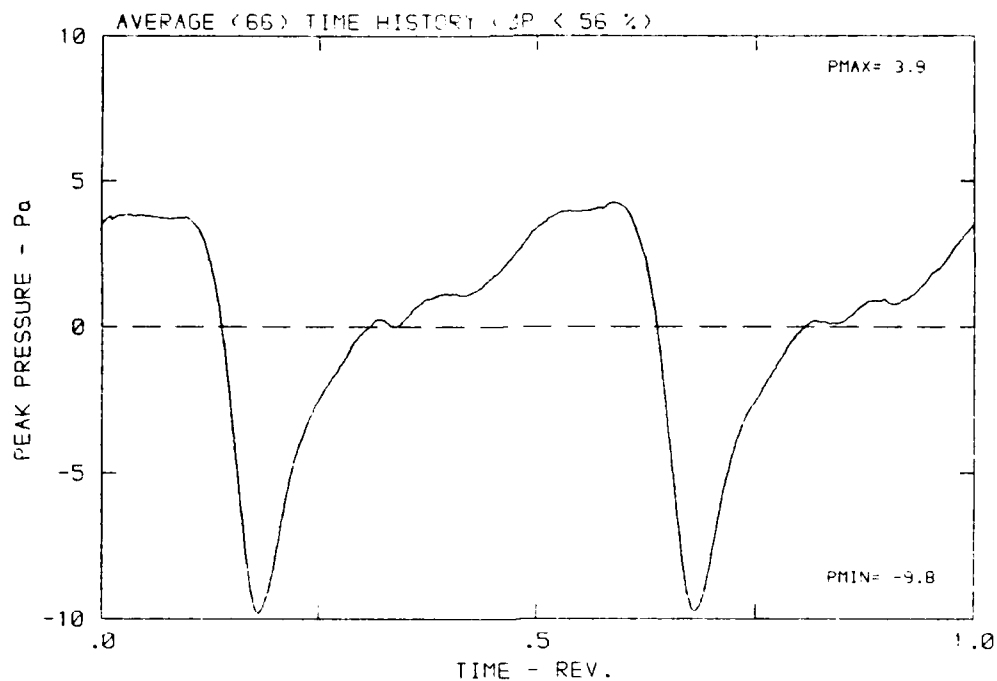
DATA POINT: GN-1 RUN: 15: MP: 3

β : 19.9° MH: .5751 n: 2100 rpm v/u : .230 ϕ : -7.4° T: 286.9 K



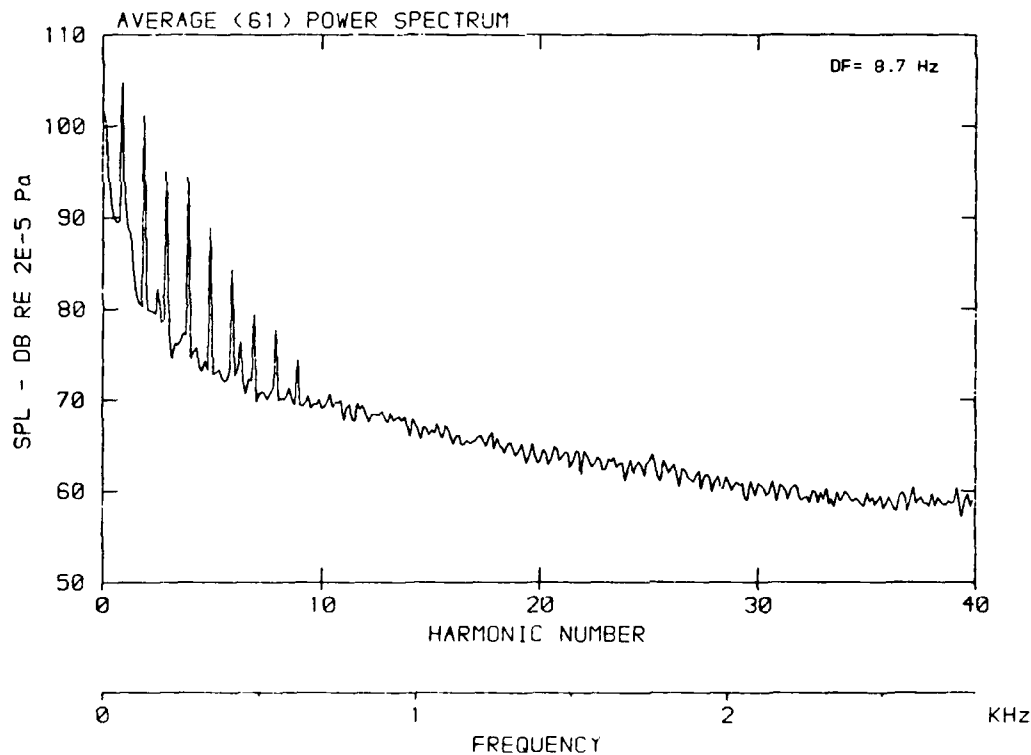
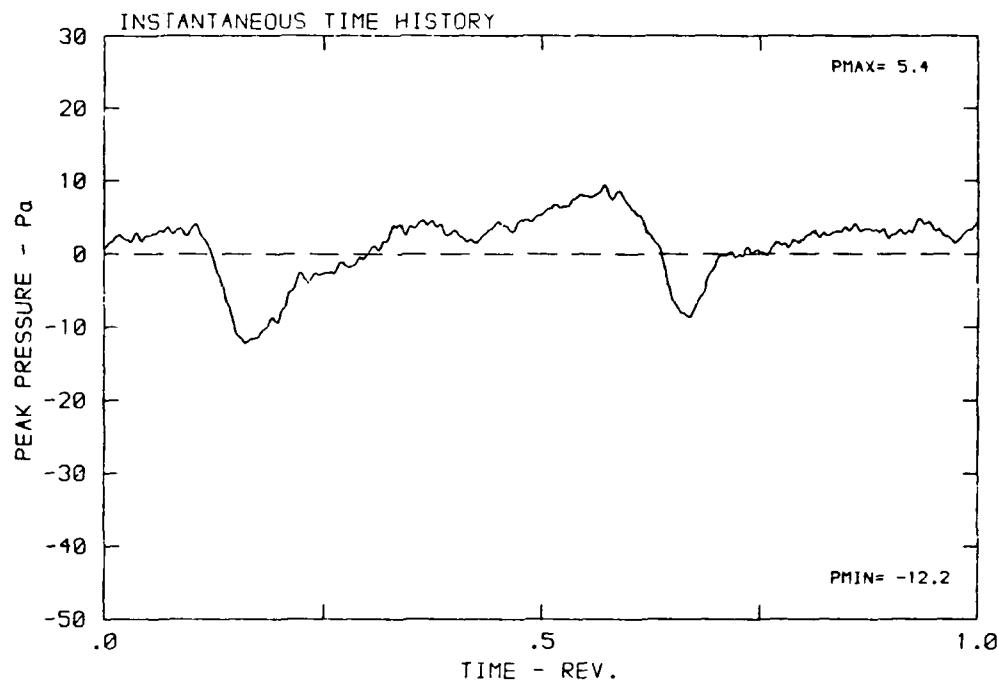
DATA PCINT: GN-1 RUN: 151 MP: 3

β : 19.9° MH: .6751 n: 2100 rpm ν_{cu} : .230 ϕ : -7.4° T: 286.9 K



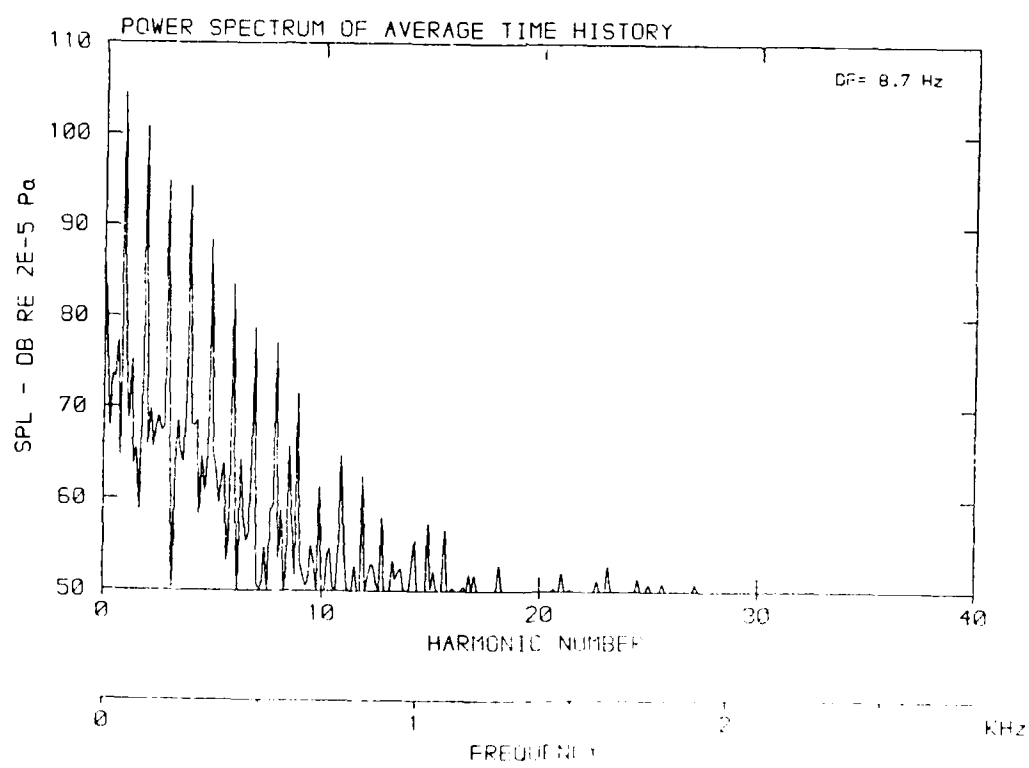
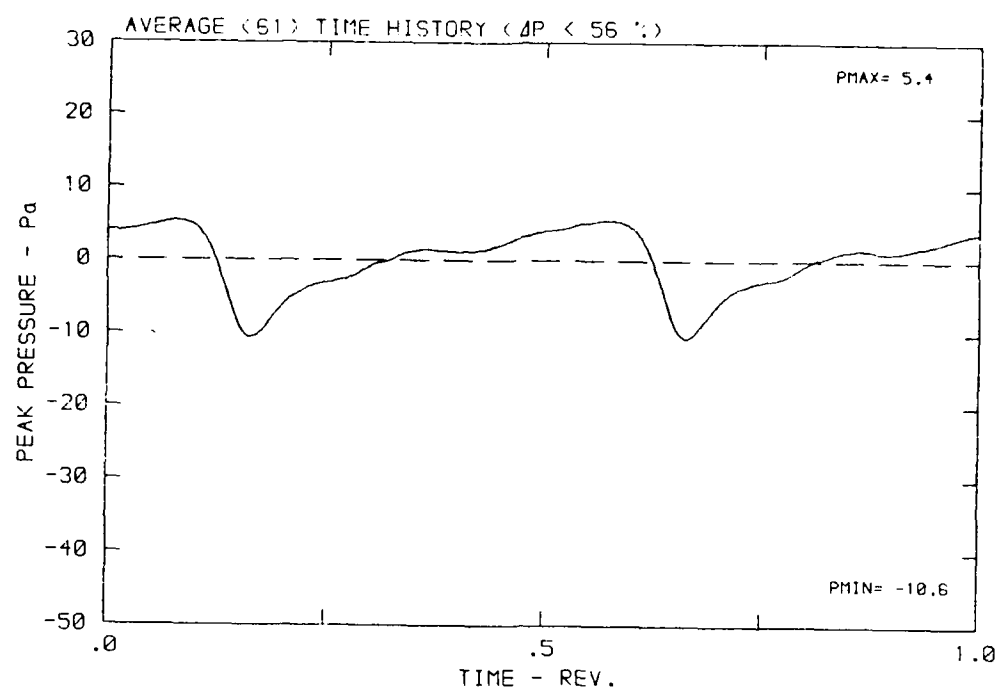
DATA POINT: GN-1 RUN: 151 MF: 4

β : 19.9° MH: .6751 n: 2100 rpm v/u : .230 ϕ : -7.4° T: 286.9 K



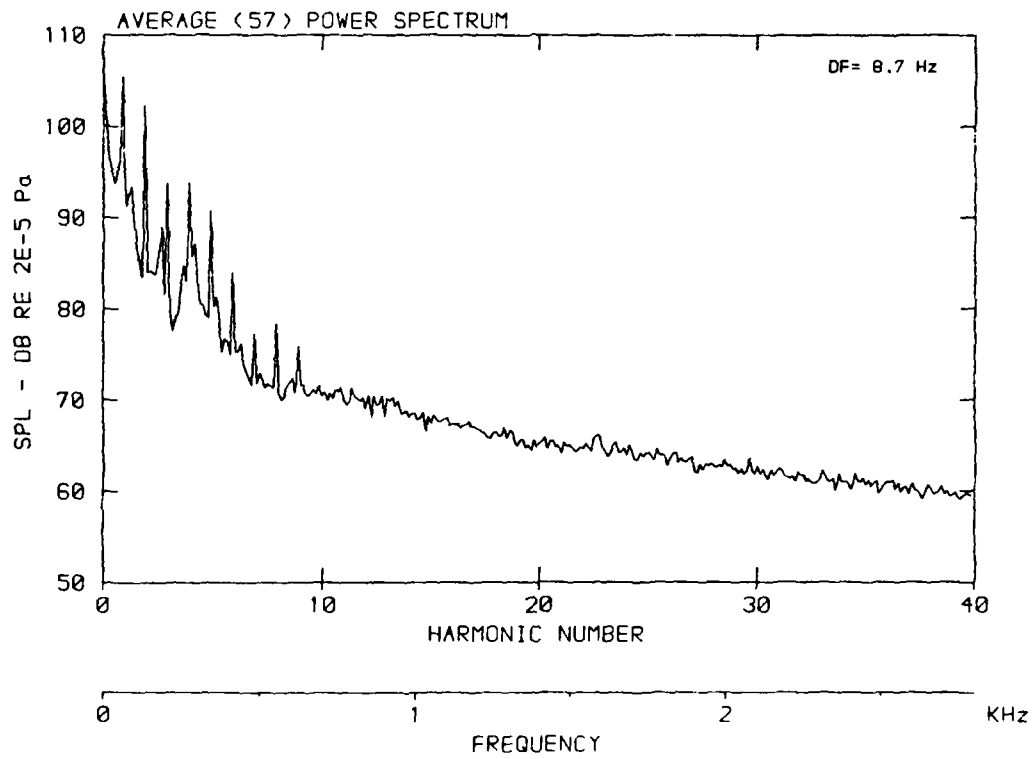
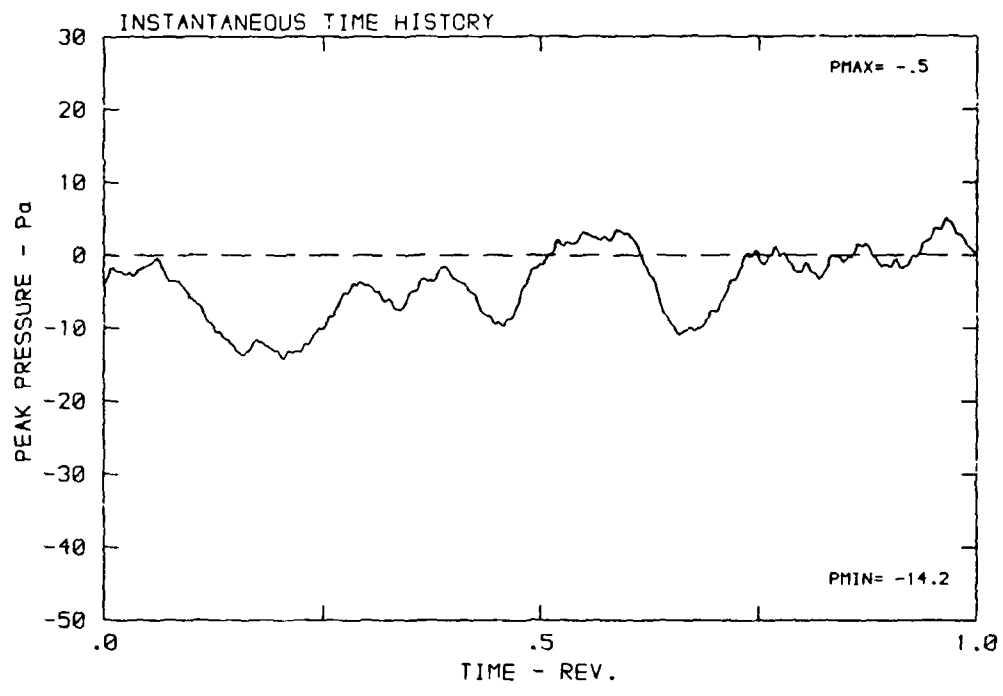
DATA POINT: GN-1 RUN: 151 MP: 4

β : 19.9° MH: .6751 n: 2100 rpm v/u : .230 ϕ : -7.4° T: 296.9 K



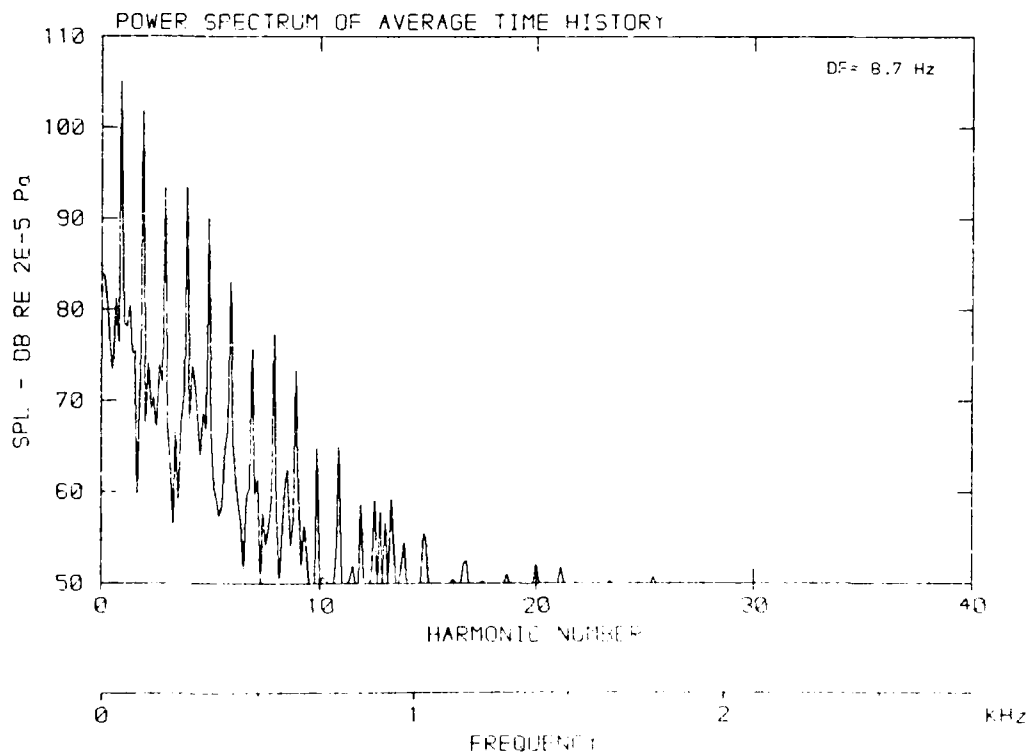
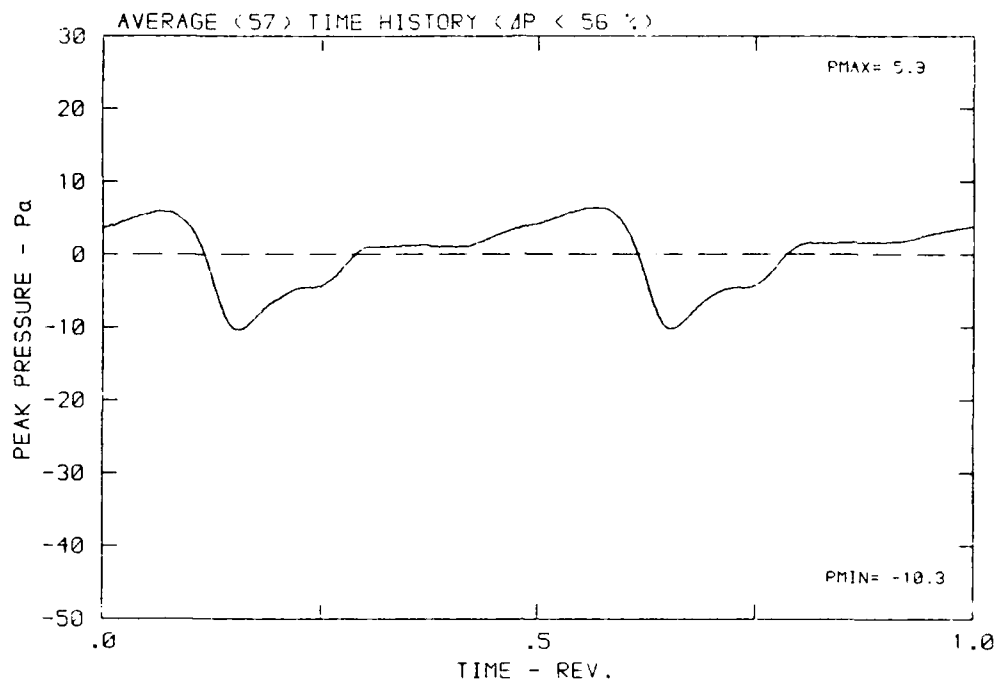
DATA POINT: GN-1 RUN: 151 MP: 5

β : 19.9° MH: .6751 n: 2100 rpm v/u: .230 ϕ : -7.4° T: 286.9 K



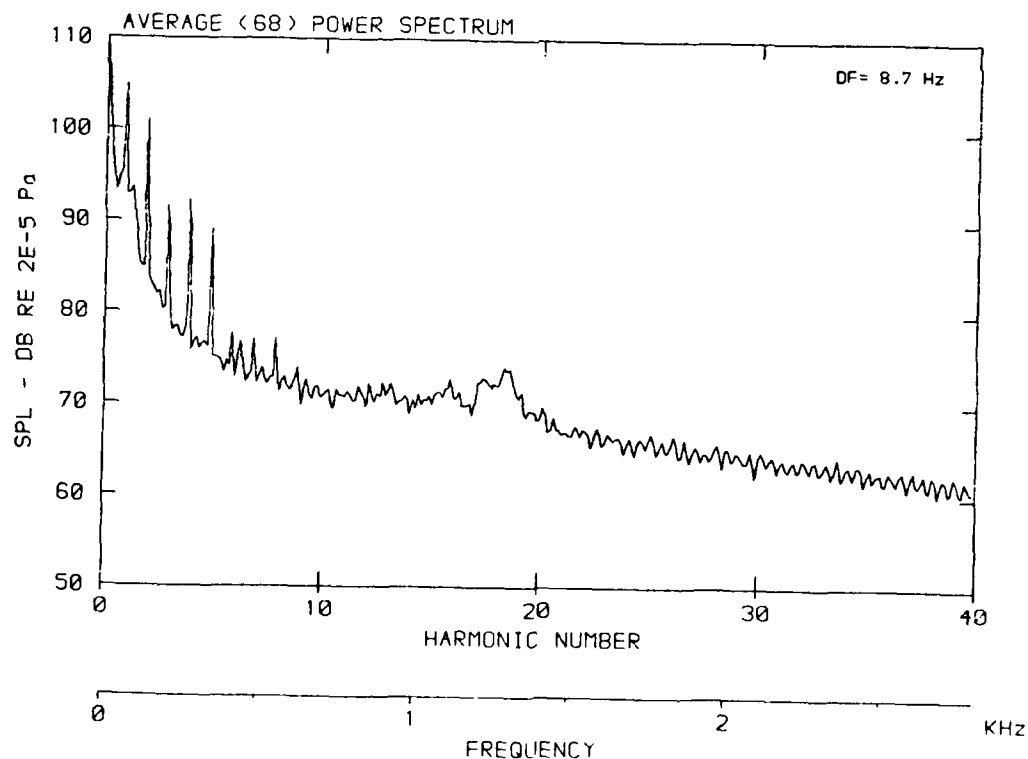
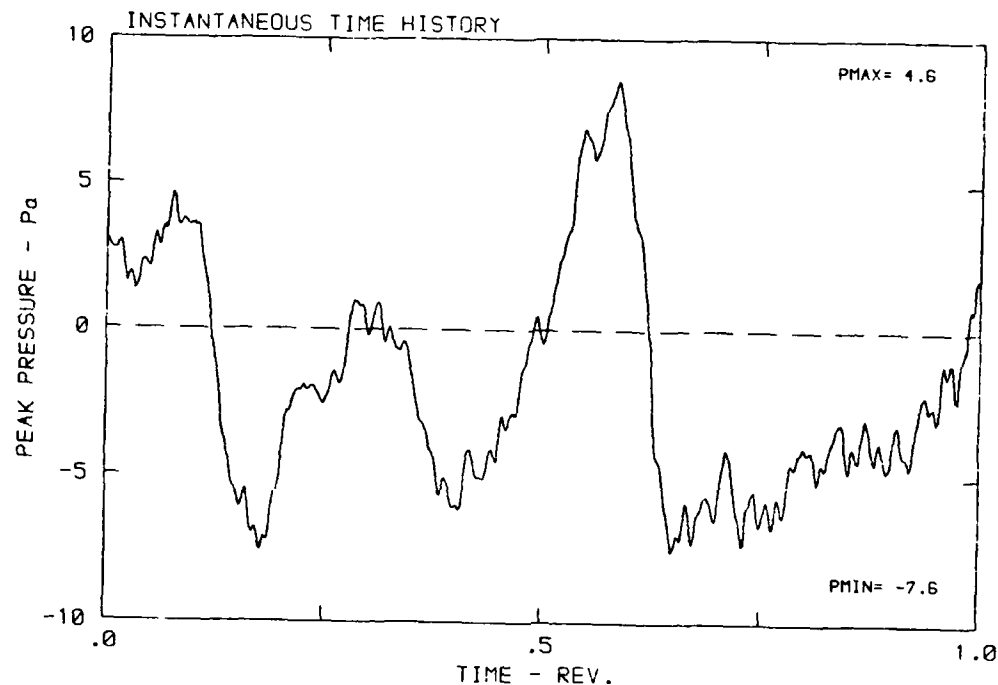
DATA POINT: GN-1 RUN: 151 MP: 5

β : 19.9° MH: .6751 n: 2100 rpm ν : .230 ϕ : -7.4° T: 286.9 K



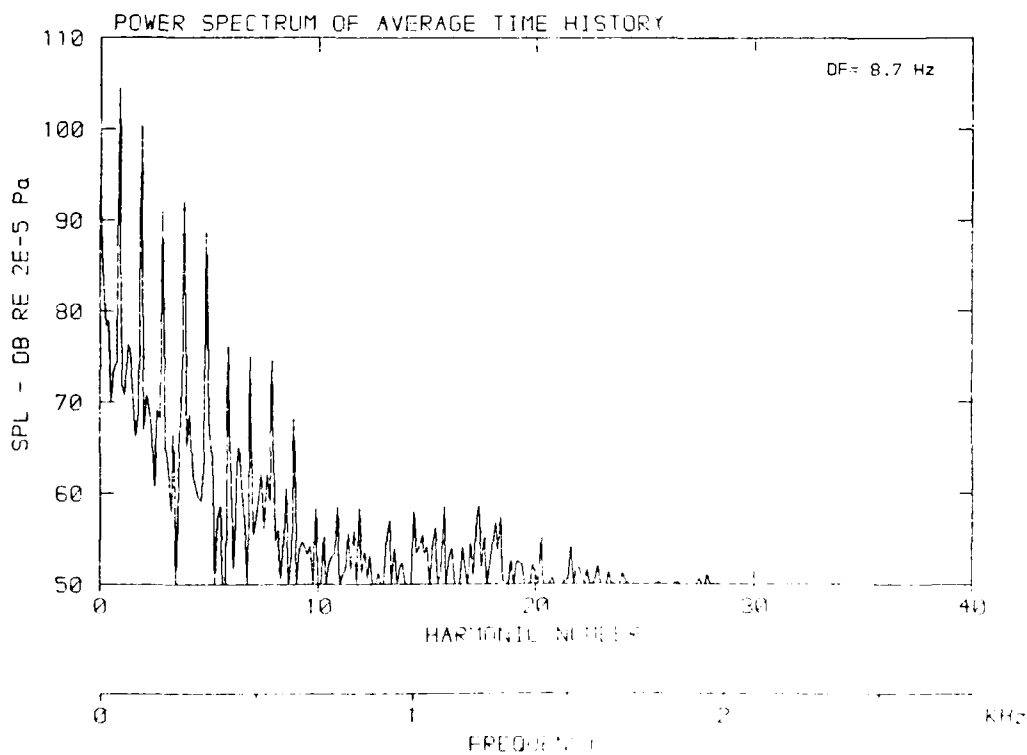
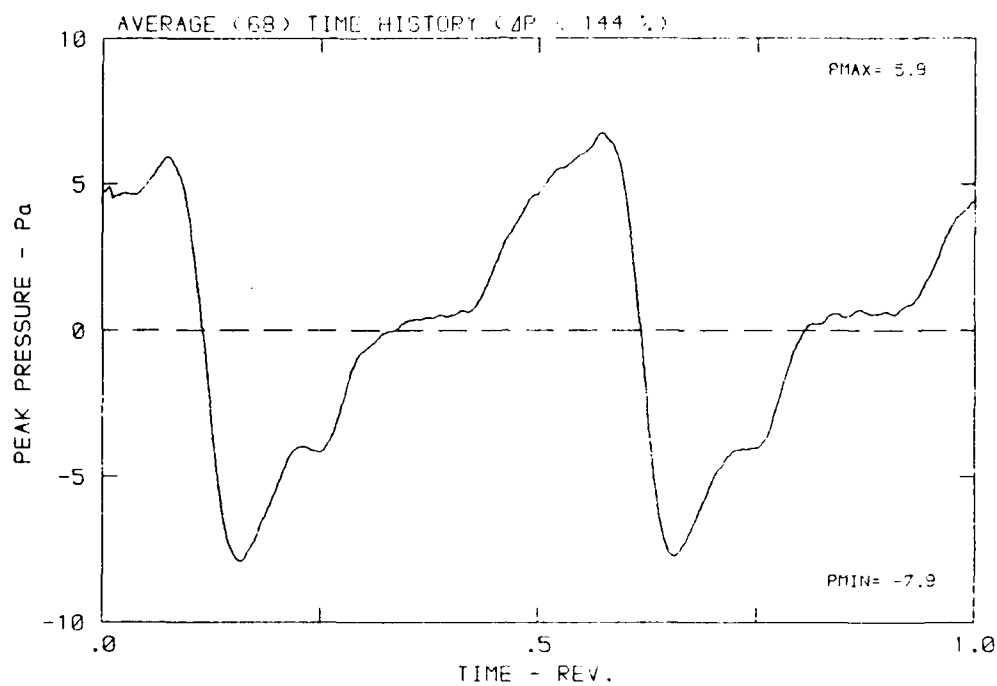
DATA POINT: GN-1 RUN: 151 MP: 6

β : 19.9° MH: .675! n: 2100 rpm v/u : .230 ϕ : -7.4° T: 286.9 K



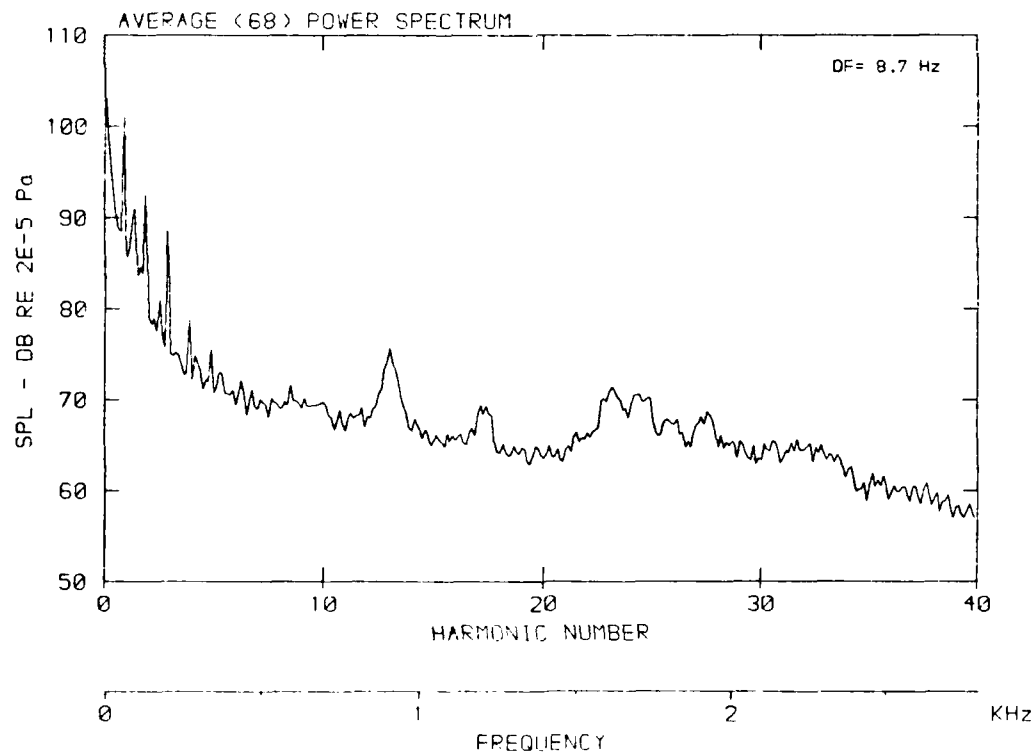
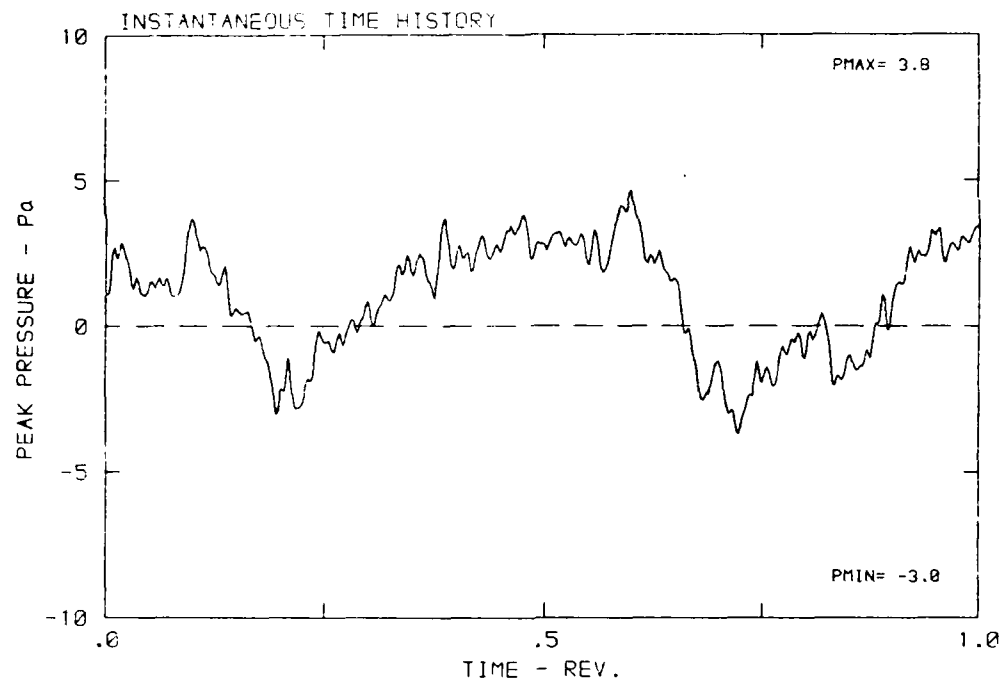
DATA POINT: GN-1 RUN: 151 MP: 6

β : 19.9° MH: .6751 n: 2100 rpm v/u : .230 ϕ : -7.4° T: 286.9 K



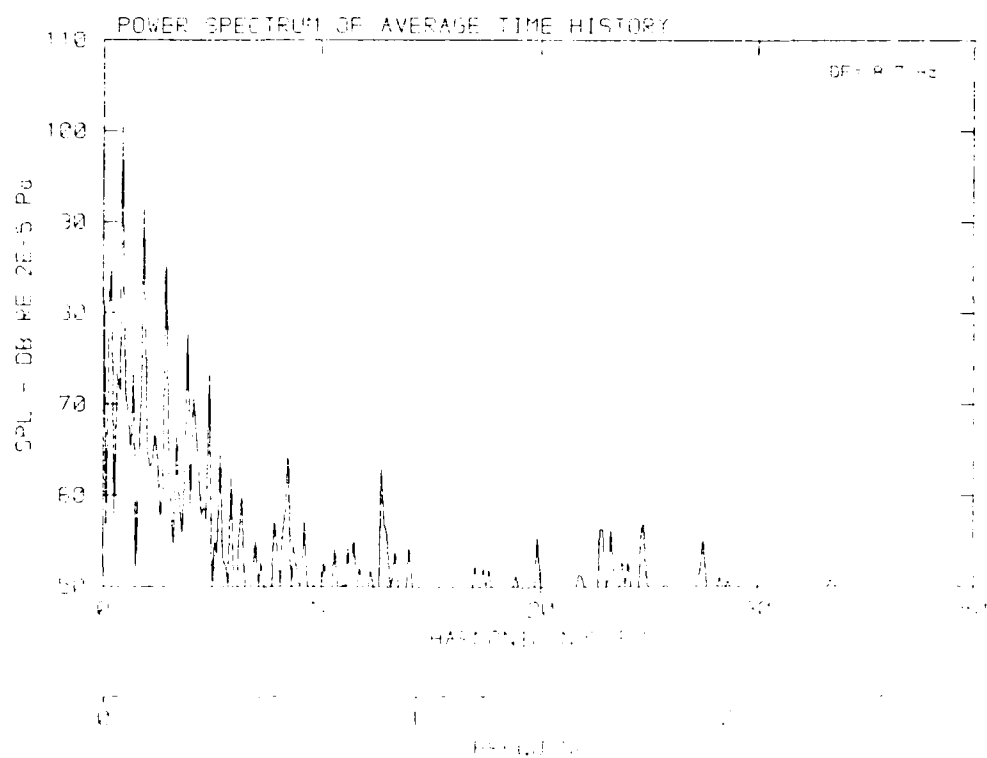
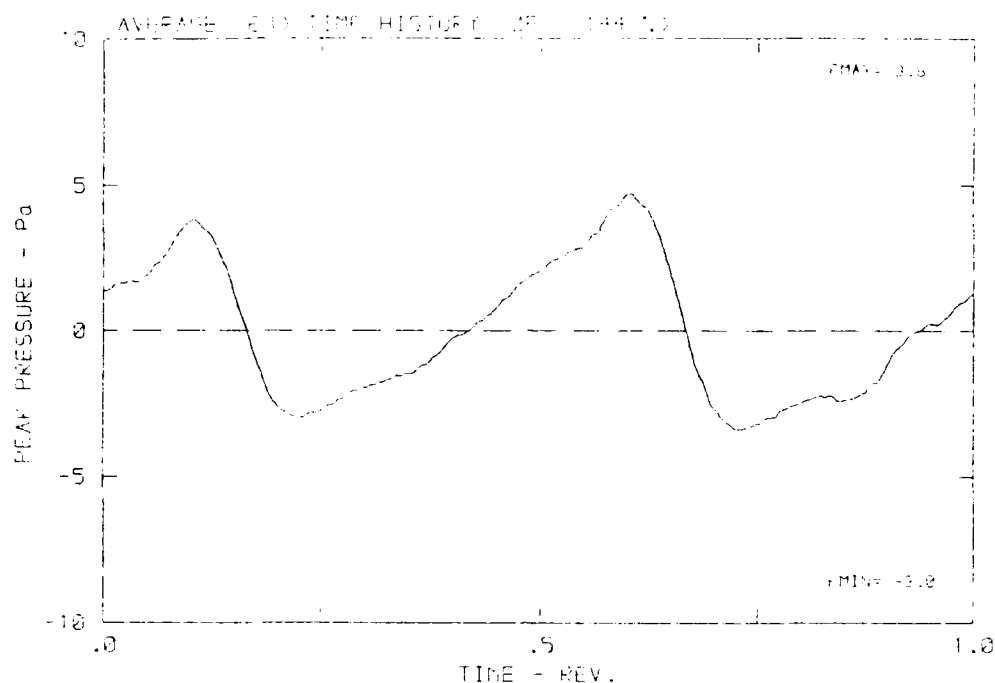
DATA POINT: GN-1 RUN: 151 MP: 7

β : 19.9° MH: .6731 n: 2100 rpm v/u : .230 ϕ : -7.4° T: 286.9 K



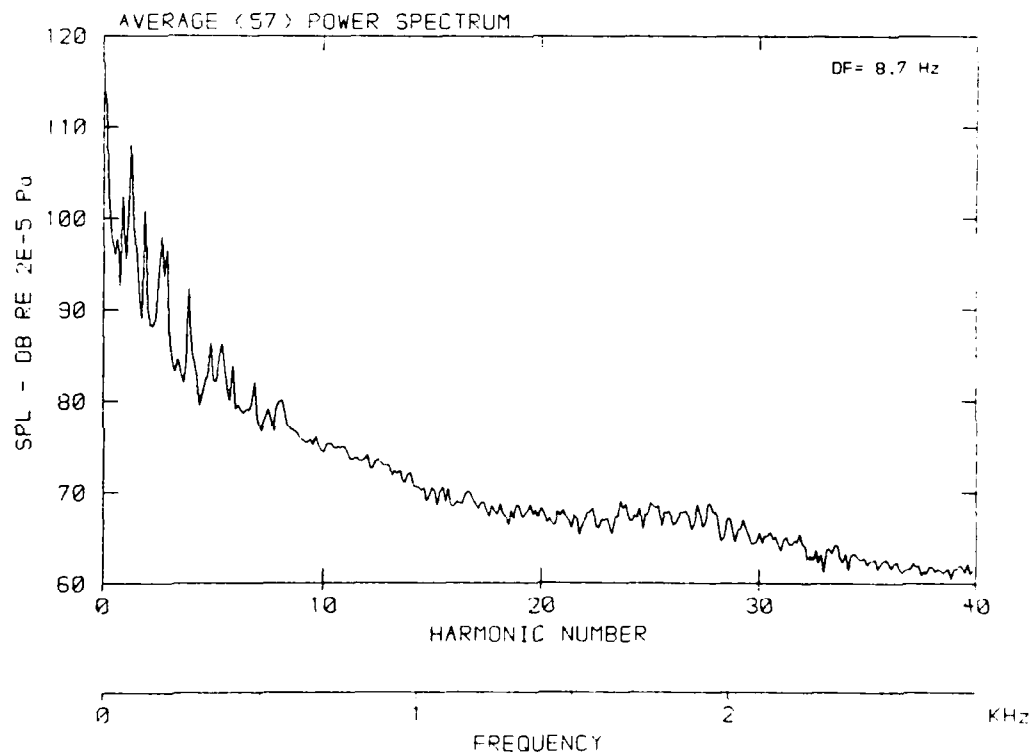
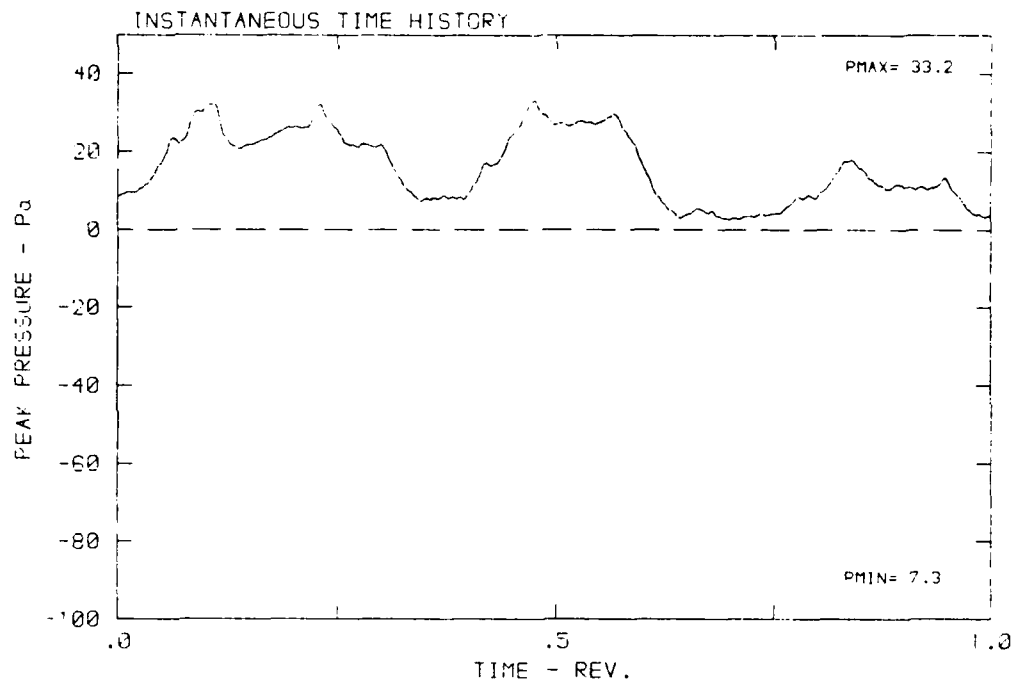
DATA POINTS (REV) FROM 150 1000 7

β : 19.9° MH: .6751 n1: 2100 rpm ϕ : .230 ϕ : 7.42° T: 256.5



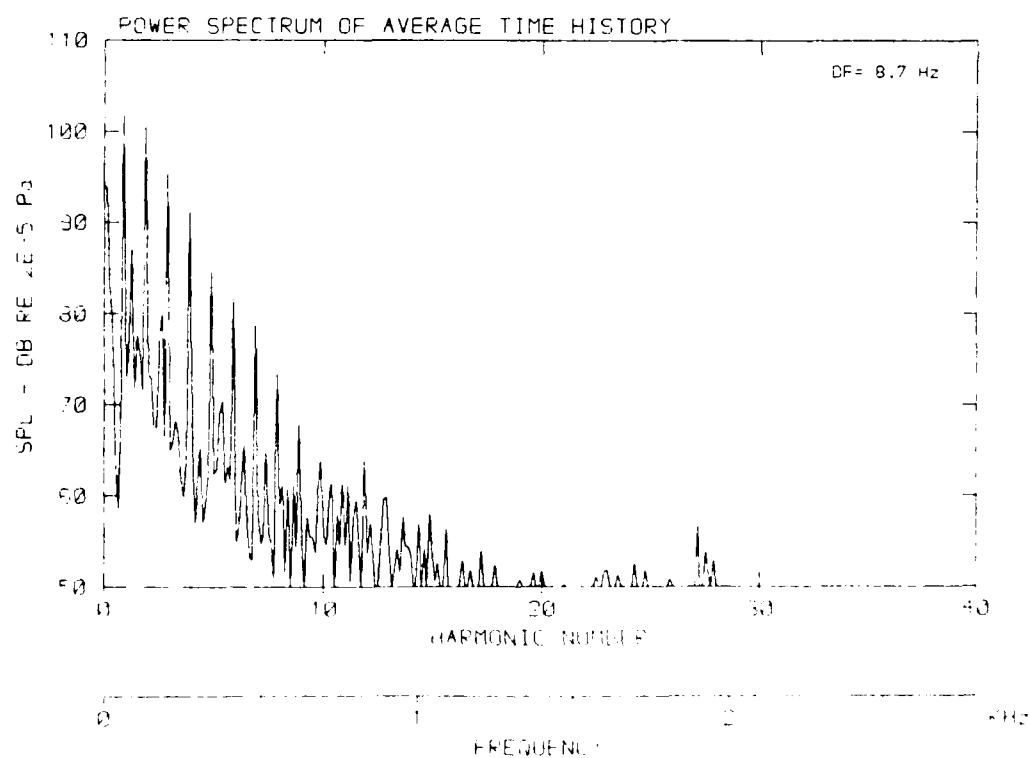
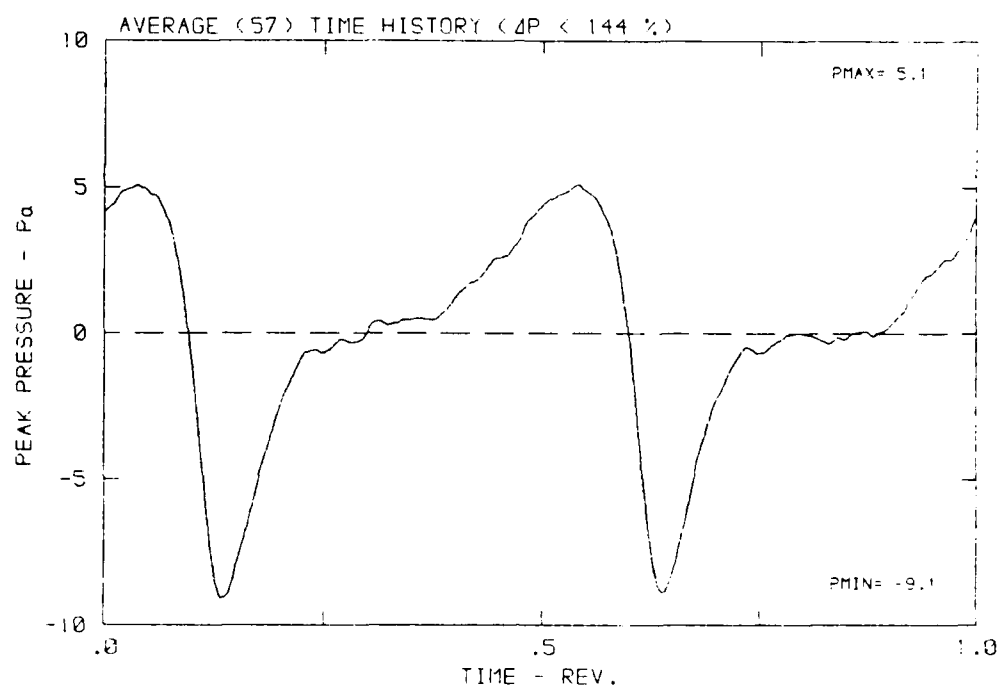
DATA POINT: GN-1 RUN: 151 MP: 8

β : 19.9° MH: .6751 n: 2100 rpm v/u : .230 ϕ : -7.4° T: 286.9 K



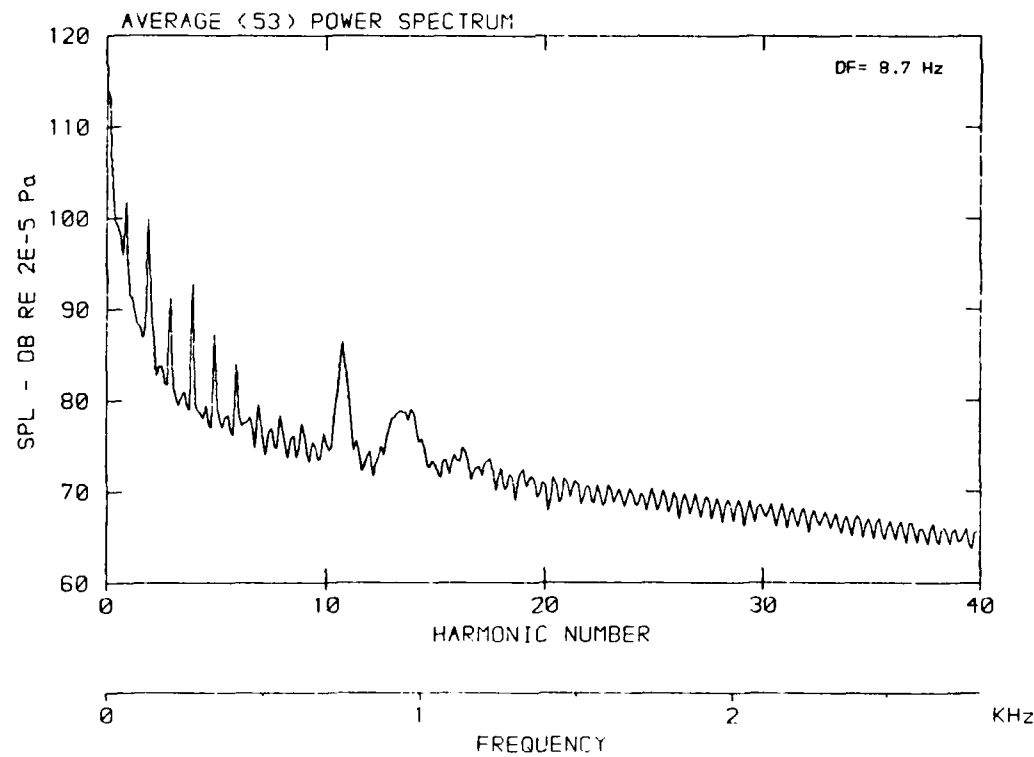
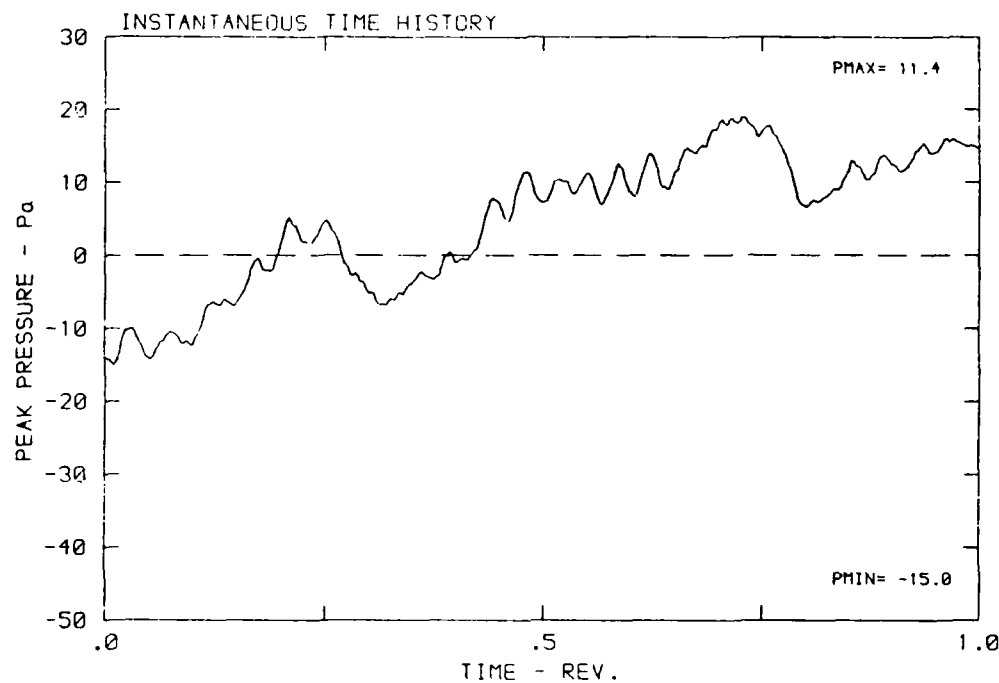
DATA POINT: GN-1 RUN: 151 MP: 8

β : 19.9° MH: .6751 n: 2100 rpm v/u : .230 ϕ : -7.4° T: 286.3 K



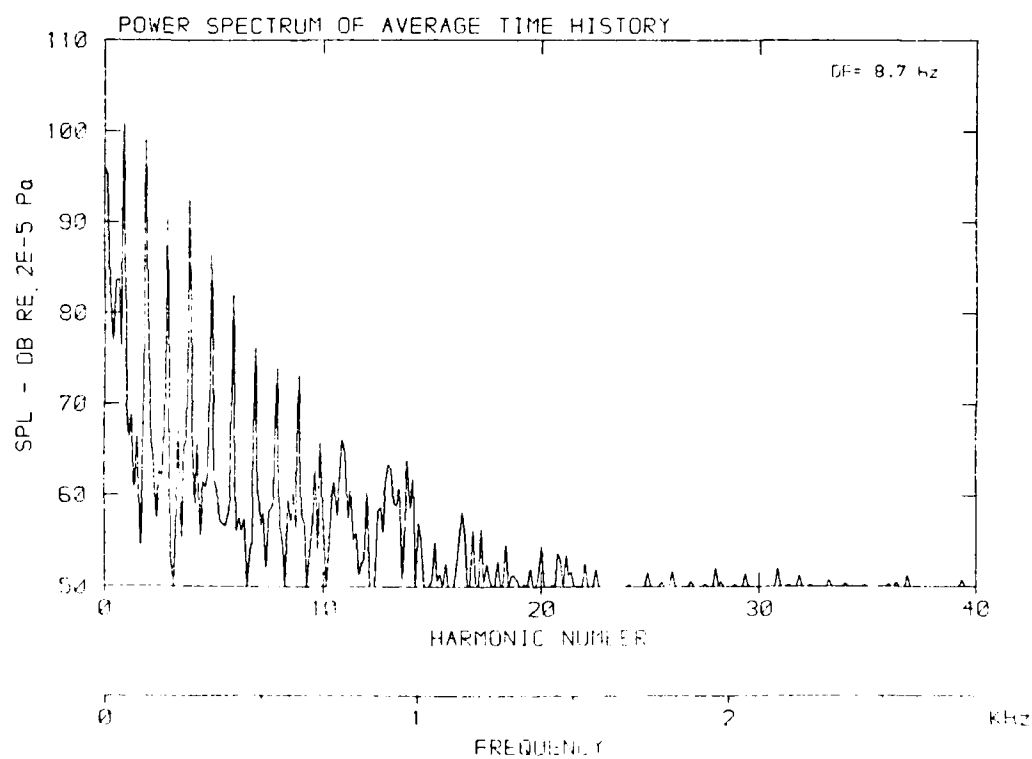
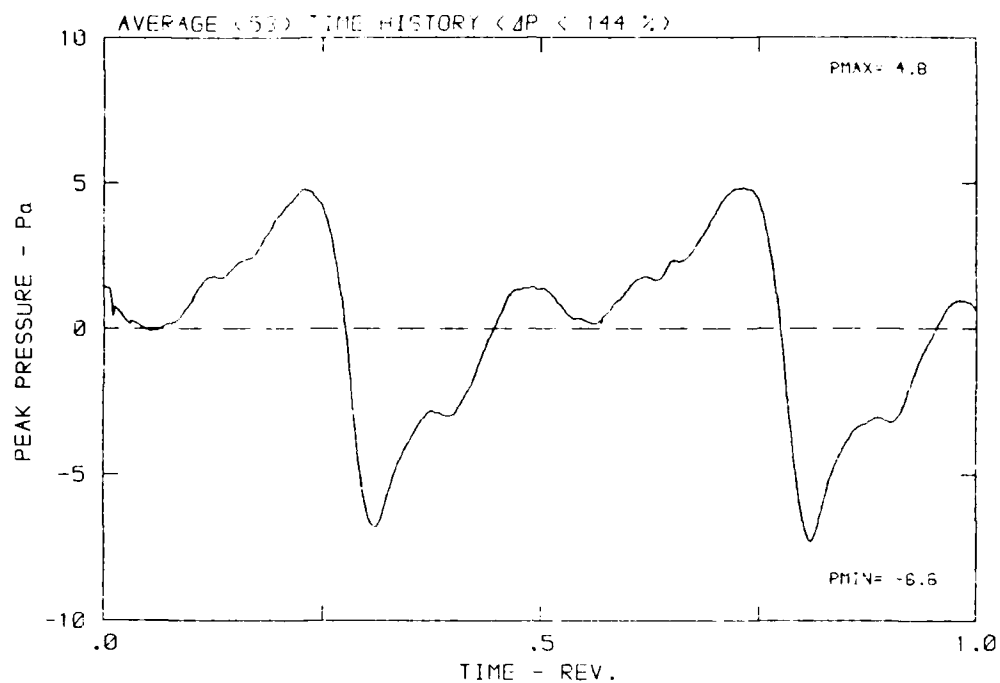
DATA POINT: GN-1 RUN: 151 MP: 9

β : 19.9° MH: .6751 n: 2100 rpm v/u : .230 ϕ : -7.4° T: 285.3 K



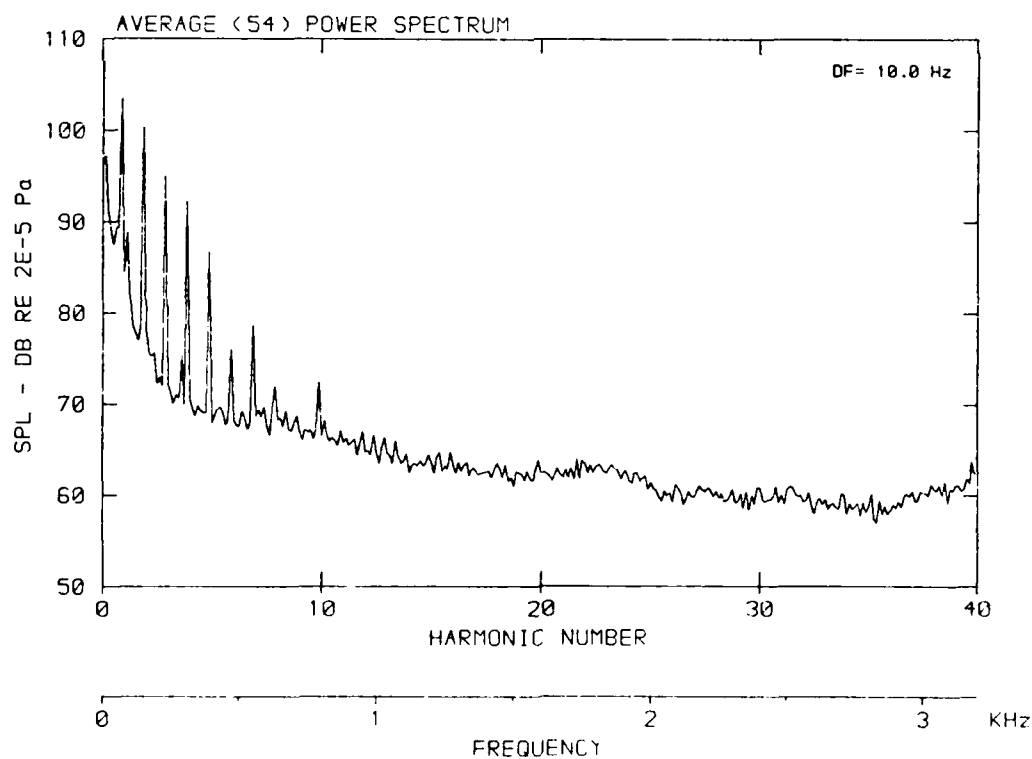
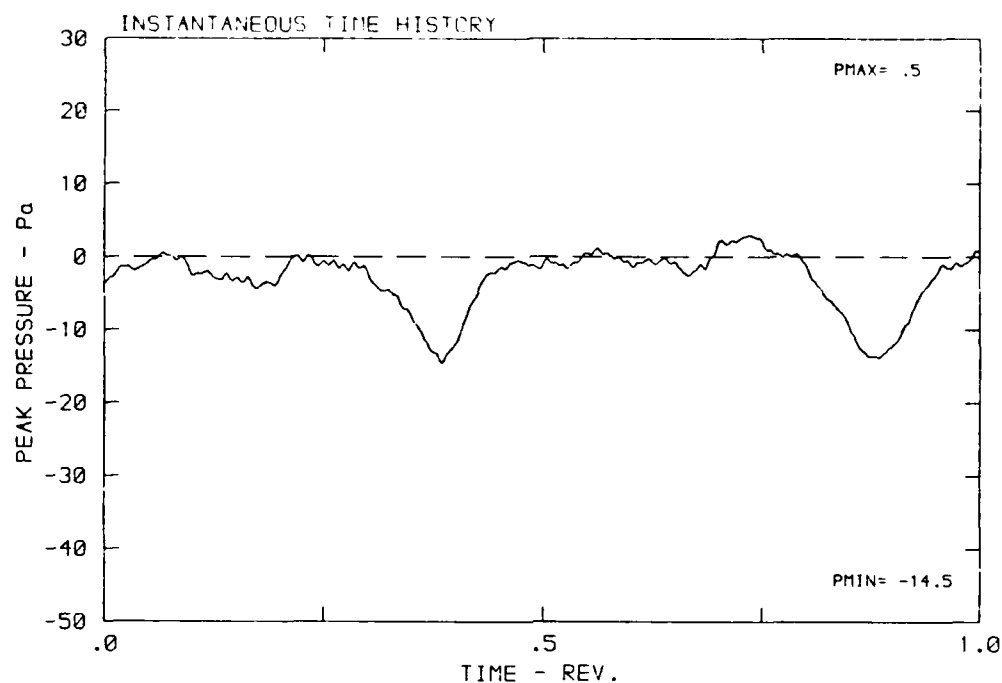
DATA POINT: GN-1 RUN: 151 MP: 9

β : 19.9° MH: .6751 n: 2100 rpm vru: .230 ϕ : -7.4° T: 286.9 K



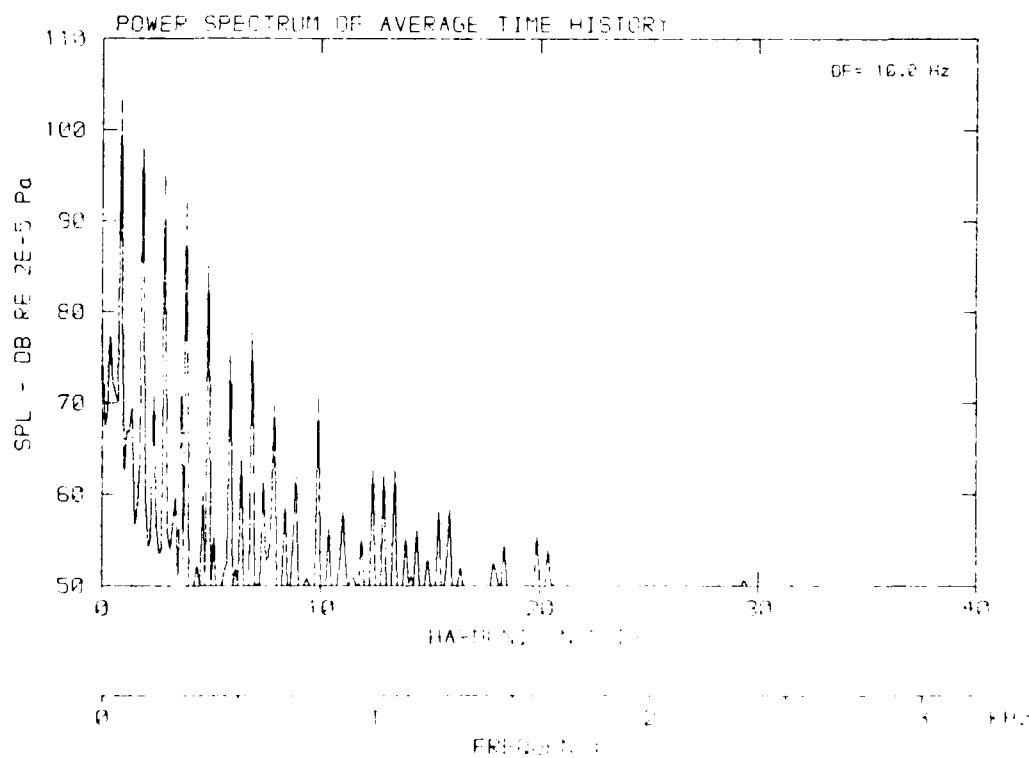
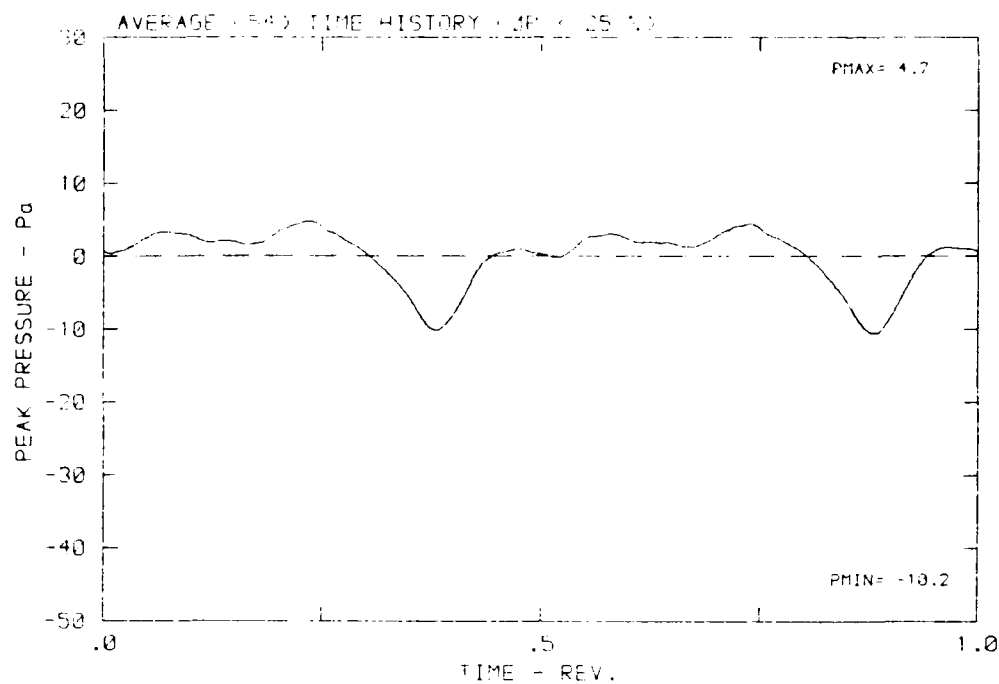
DATA POINT: GN-2 RUN: 152 MP: 1

β : 19.9° MH: .7664 n: 2400 rpm v/u : .200 ϕ : -7.4° T: 157.5



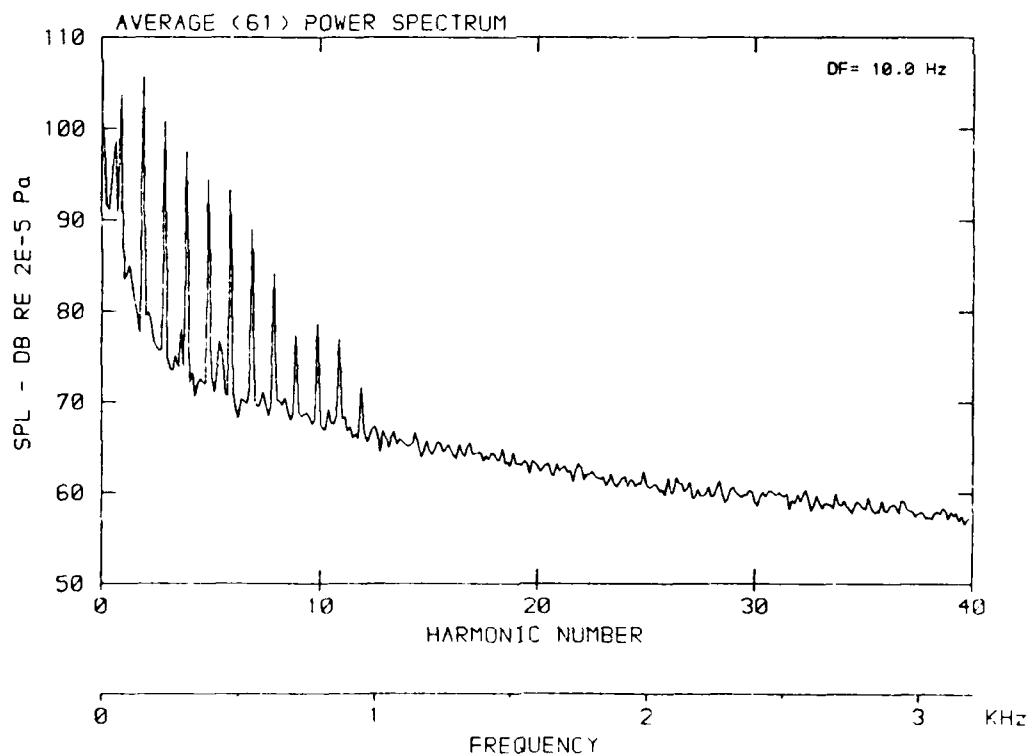
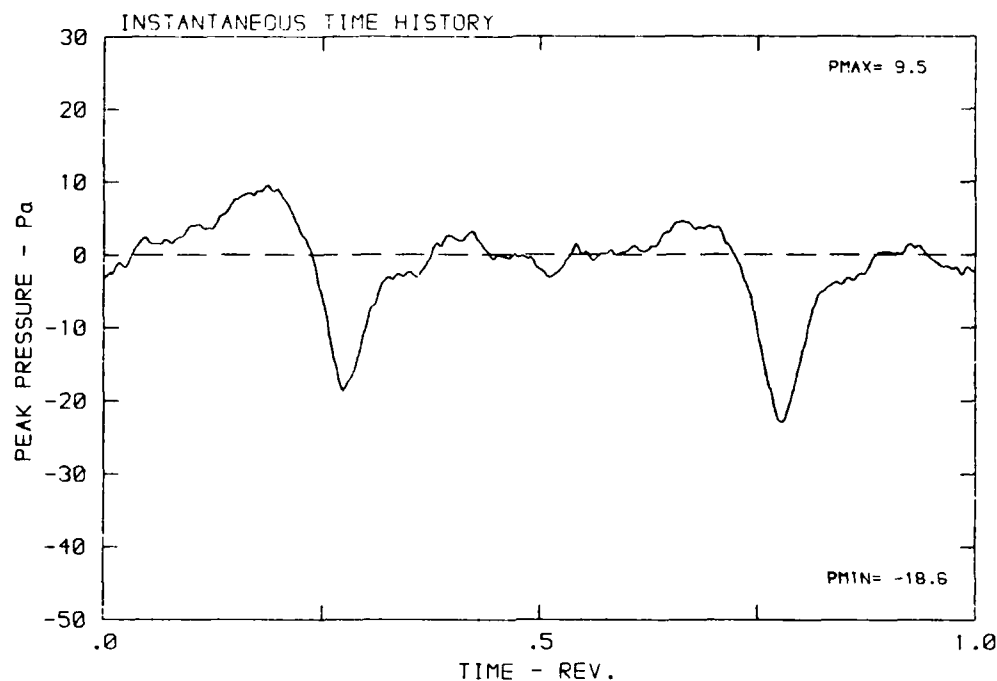
DATA POINT: 6N-2 RUN: 15 ME: 1

β : 19.9° MH: .7804 n: 2400 rpm V: .202 ϕ : -7.4° T: 287.5 K



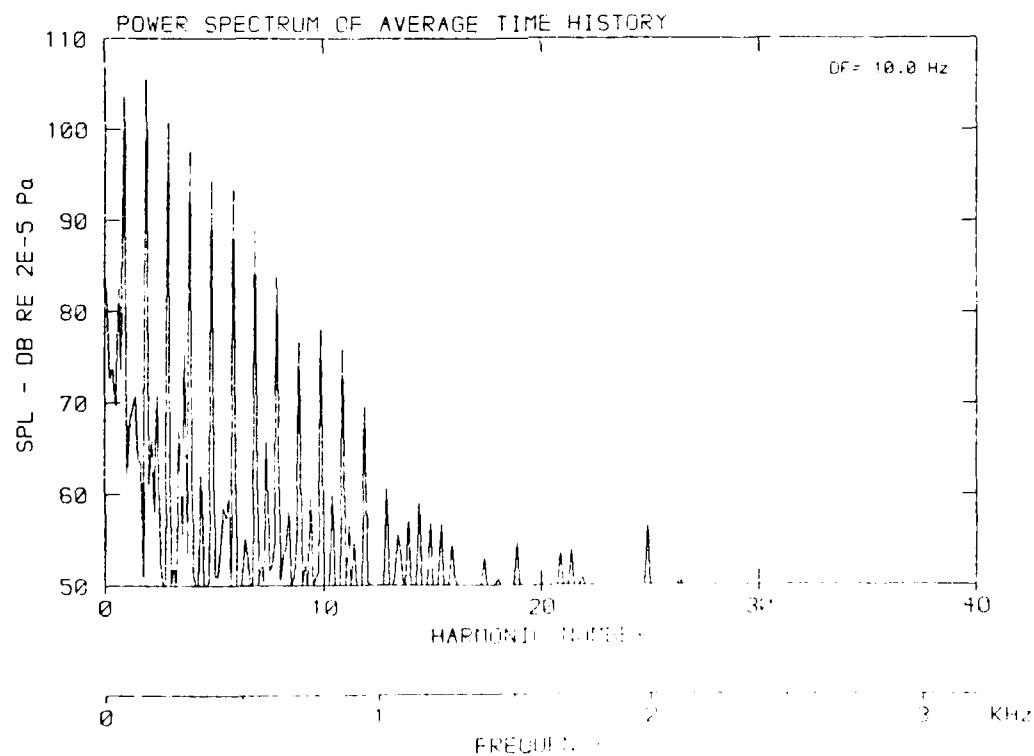
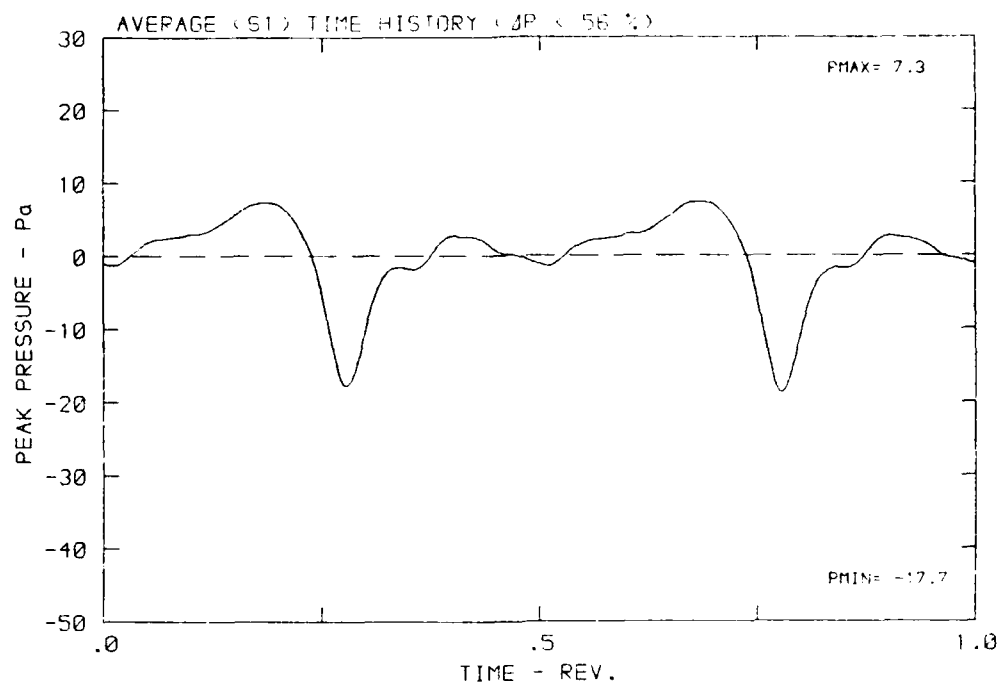
DATA POINT: GN-2 RUN: 152 MP: 2

β : 19.9° MH: .7664 n: 2400 rpm v/u : .202 ϕ : -7.4° T: 287.5 K



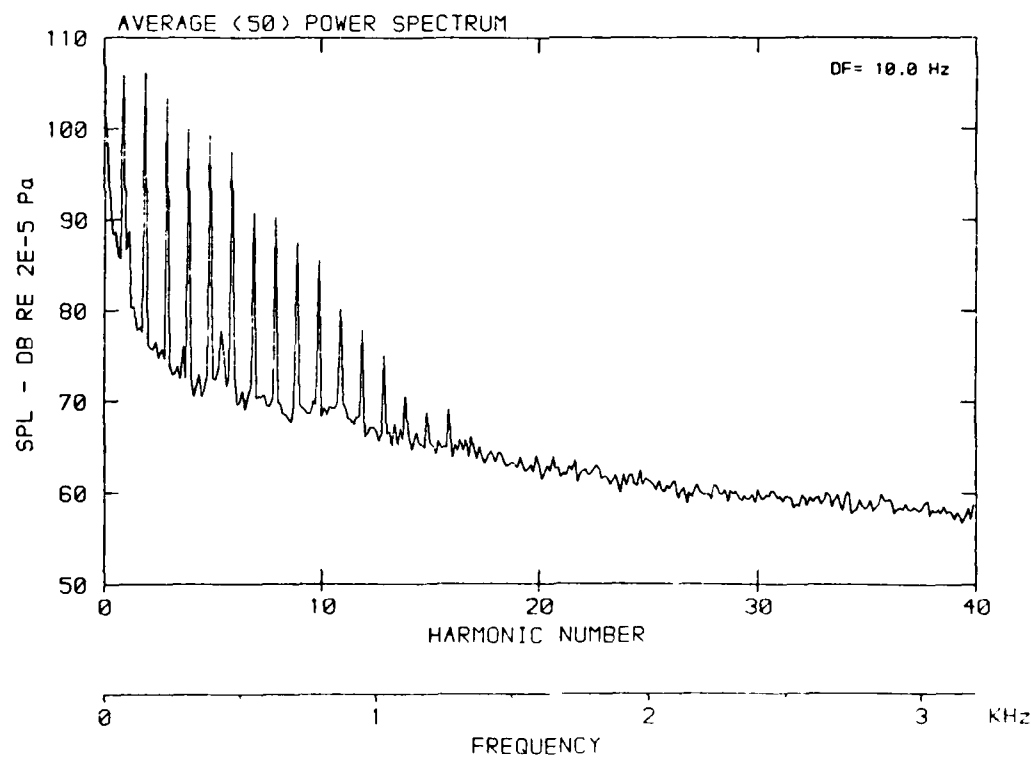
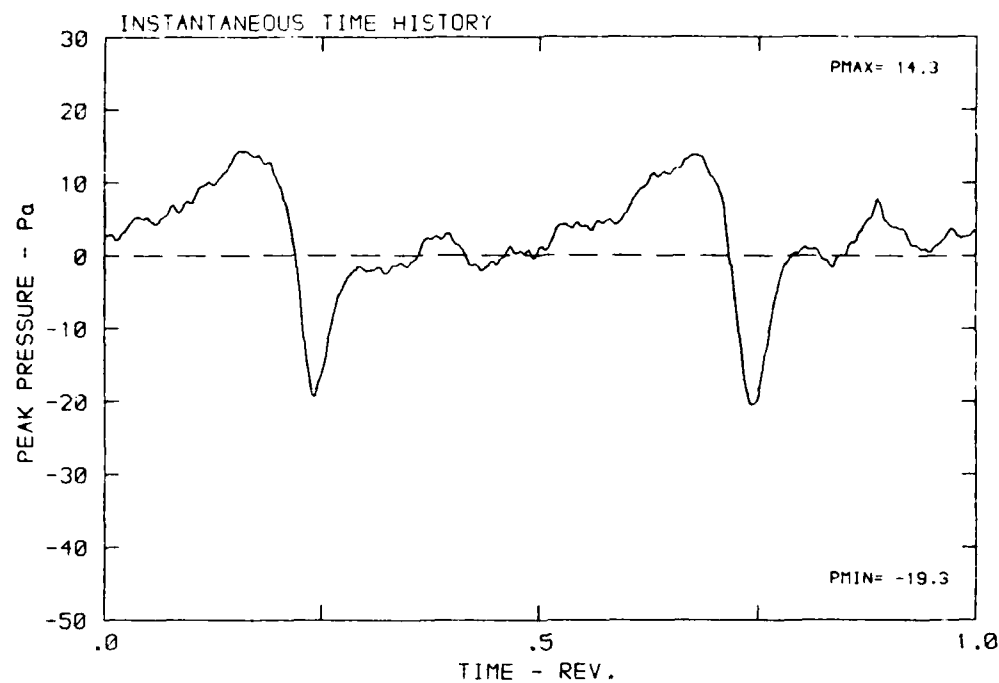
DATA POINT: GN-2 PIN: 152 MP: 2

β : 19.9° MH: .7664 n: 2400 rpm vlu: .200 ϕ : -7.4° T: 287.5 K



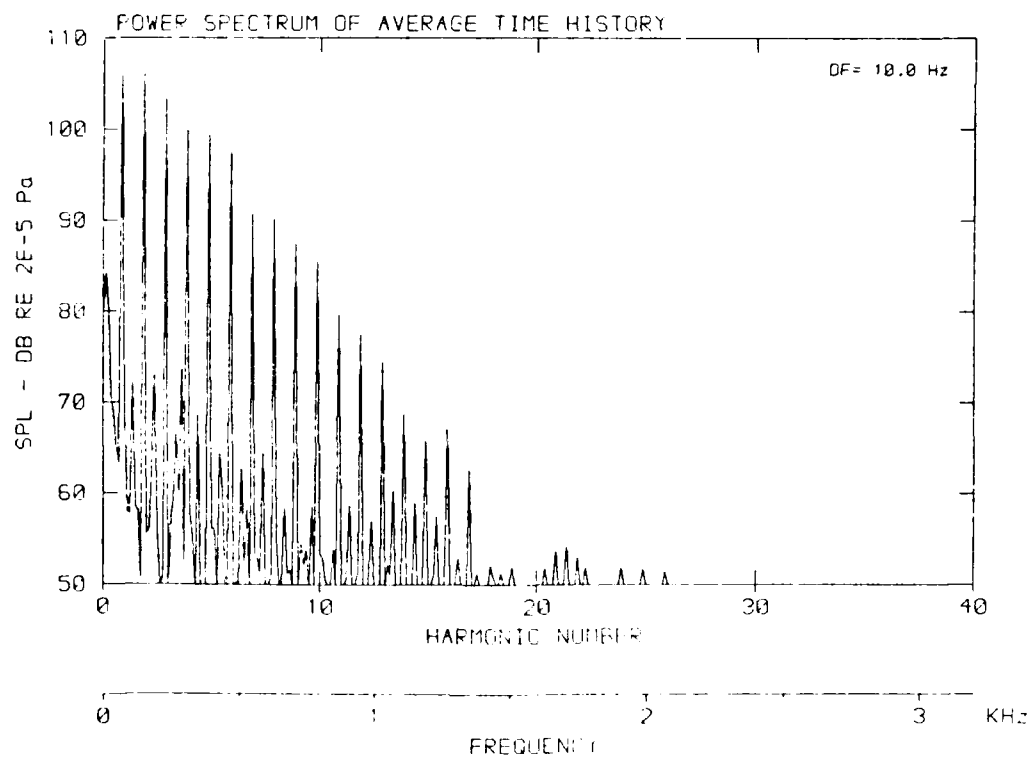
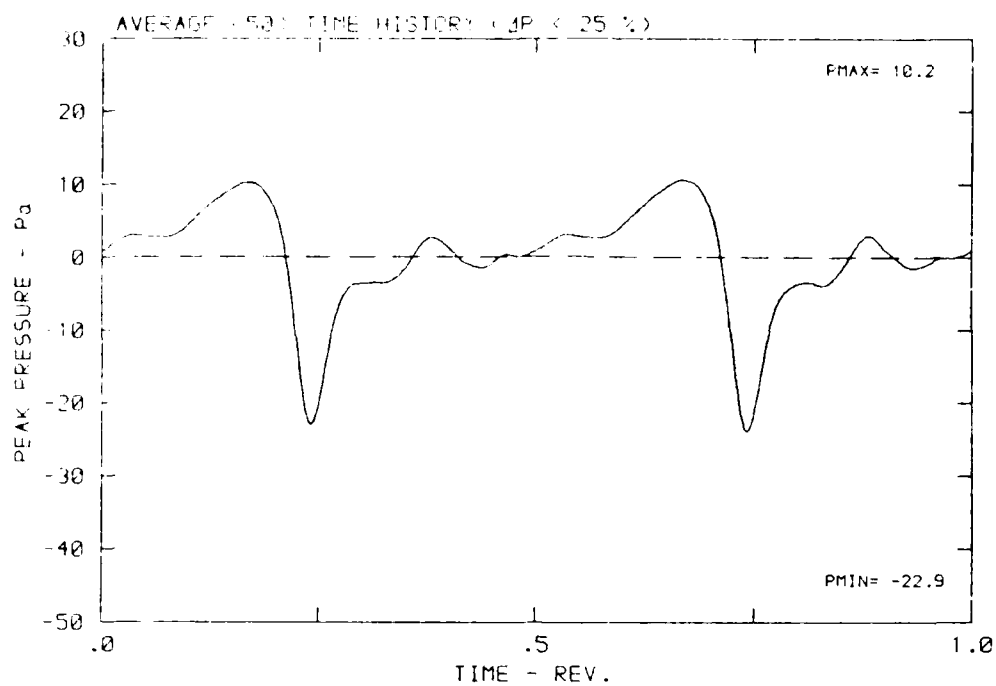
DATA POINT: GN-2 RUN: 152 MP: 3

β : 19.9° MH: .7664 n: 2400 rpm v/u: .202 ϕ : -7.4° T: 287.5 K



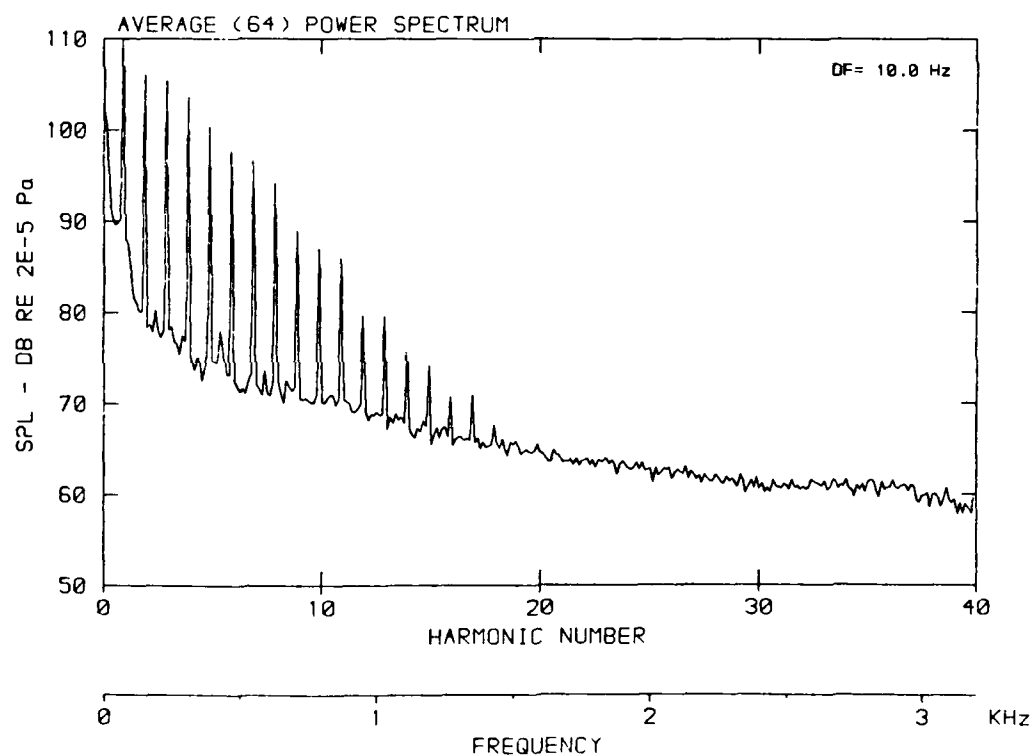
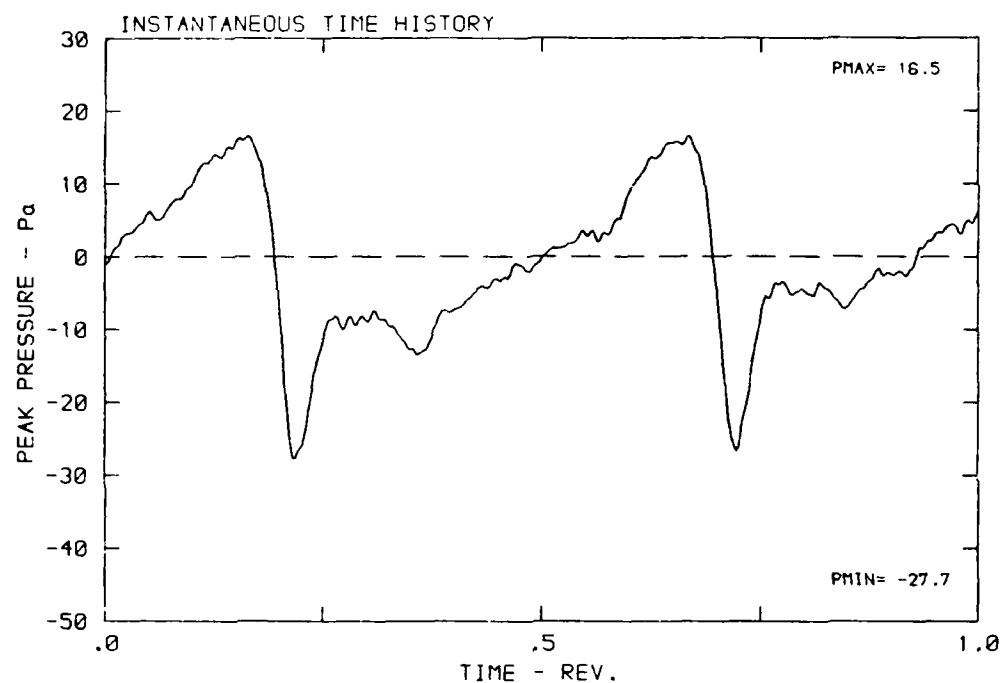
DATA POINT: GN-2 RUN: 152 MP: 3

β : 19.9° MH: .7664 n: 2400 rpm ν : .202 ϕ : -7.4° T: 287.5 K



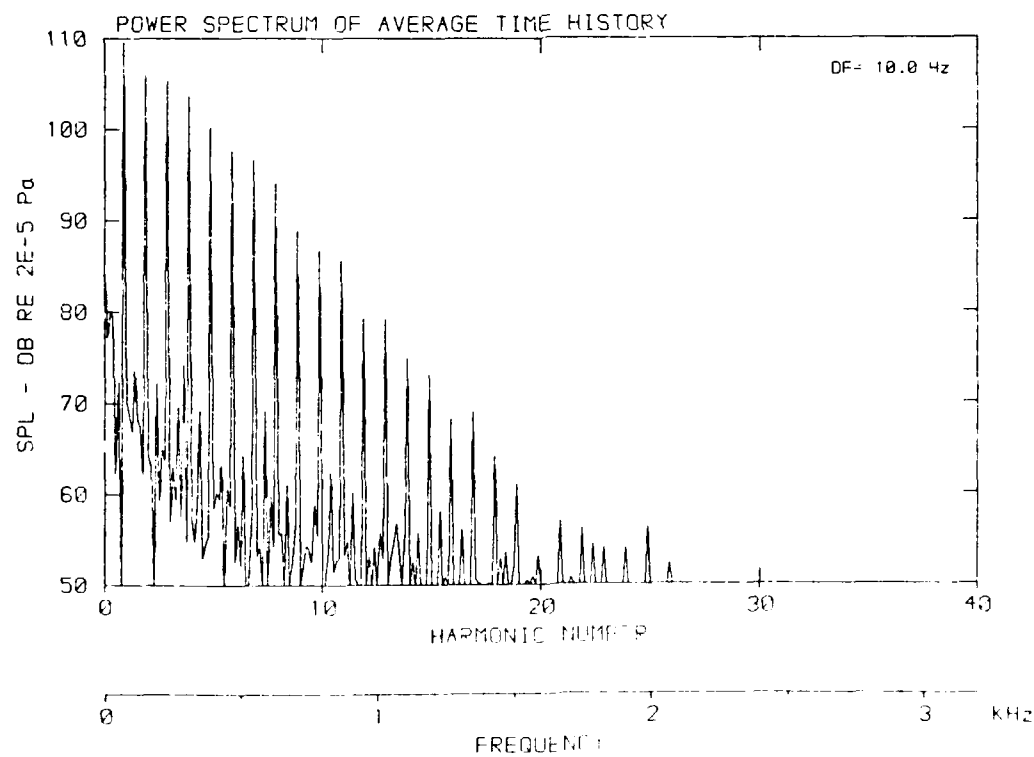
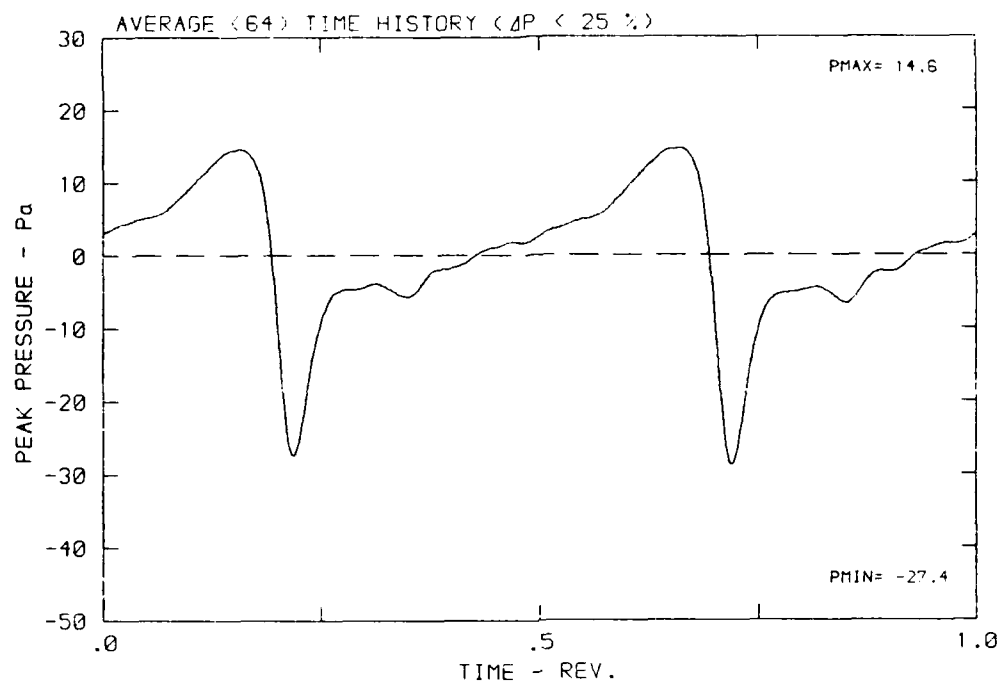
DATA POINT: GN-2 RUN: 152 MP: 4

β : 19.9° MH: .7664 n: 2400 rpm v/u : .202 ϕ : -7.4° T: 287.5 K



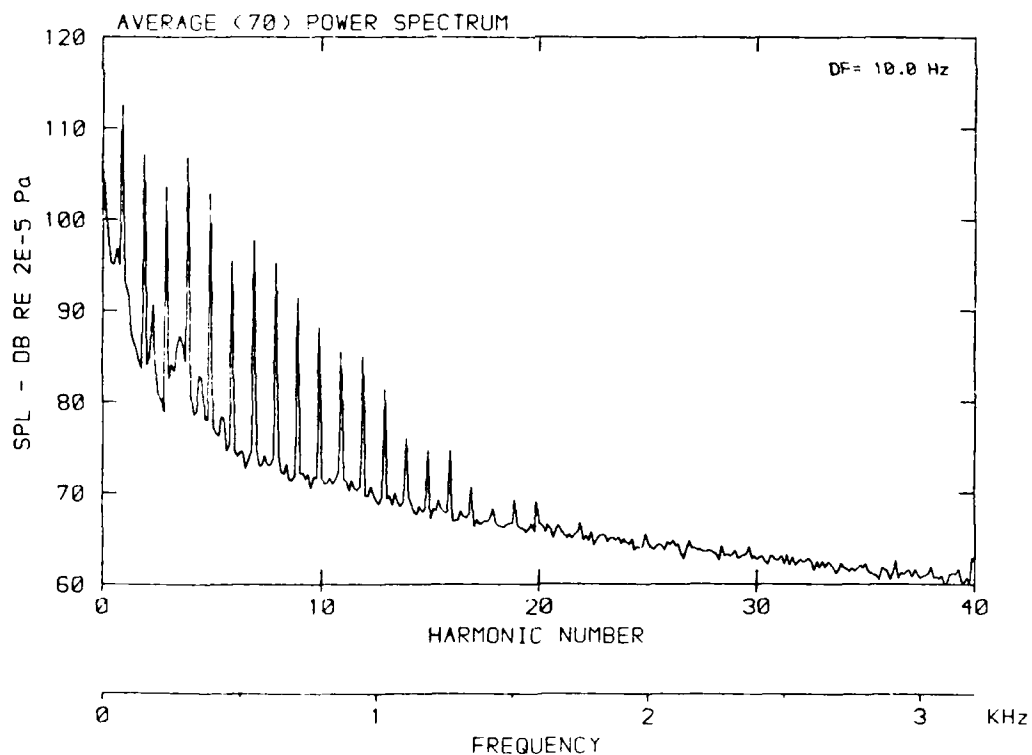
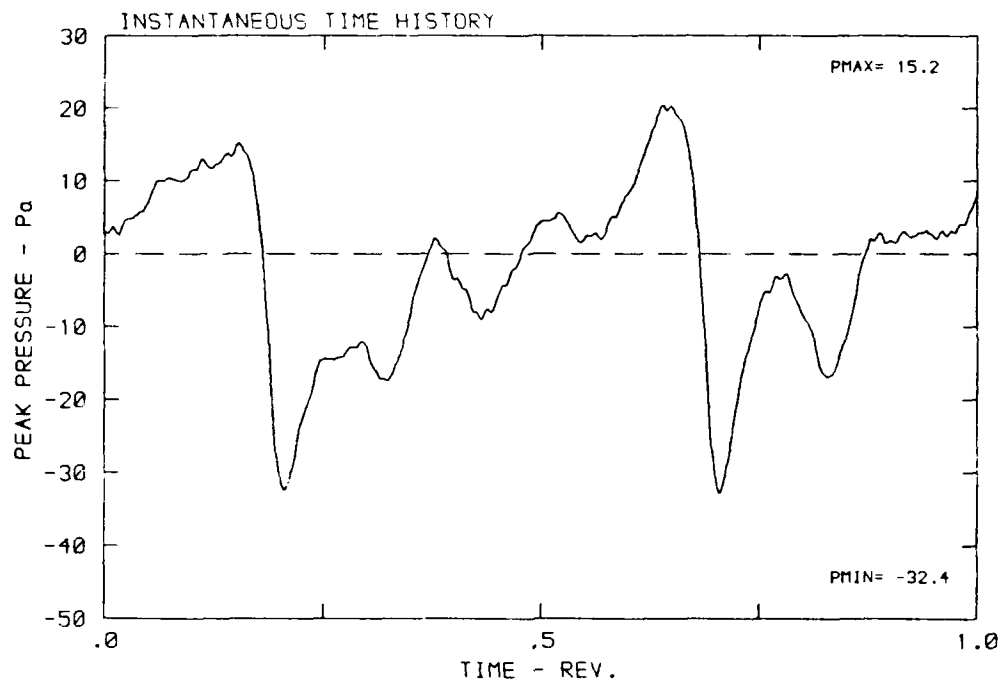
DATA POINT: GN-2 RUN: 152 MP: 4

β : 19.9° MH: .7664 n: 2400 rpm v/u : .202 ϕ : -7.4° T: 287.5 K



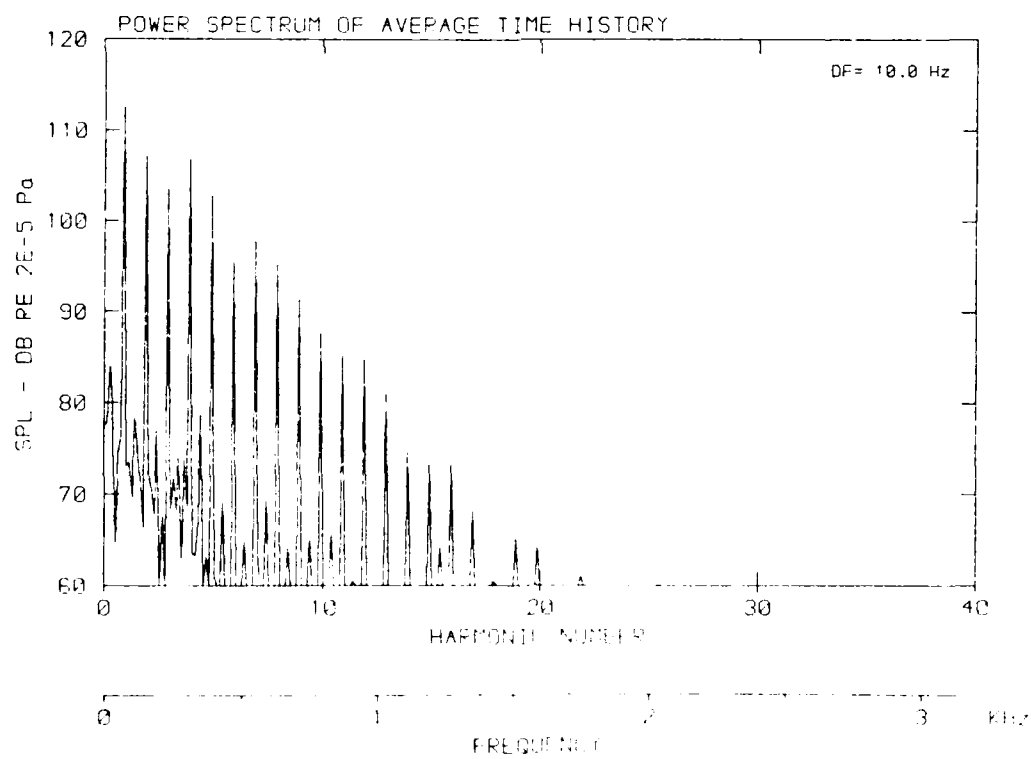
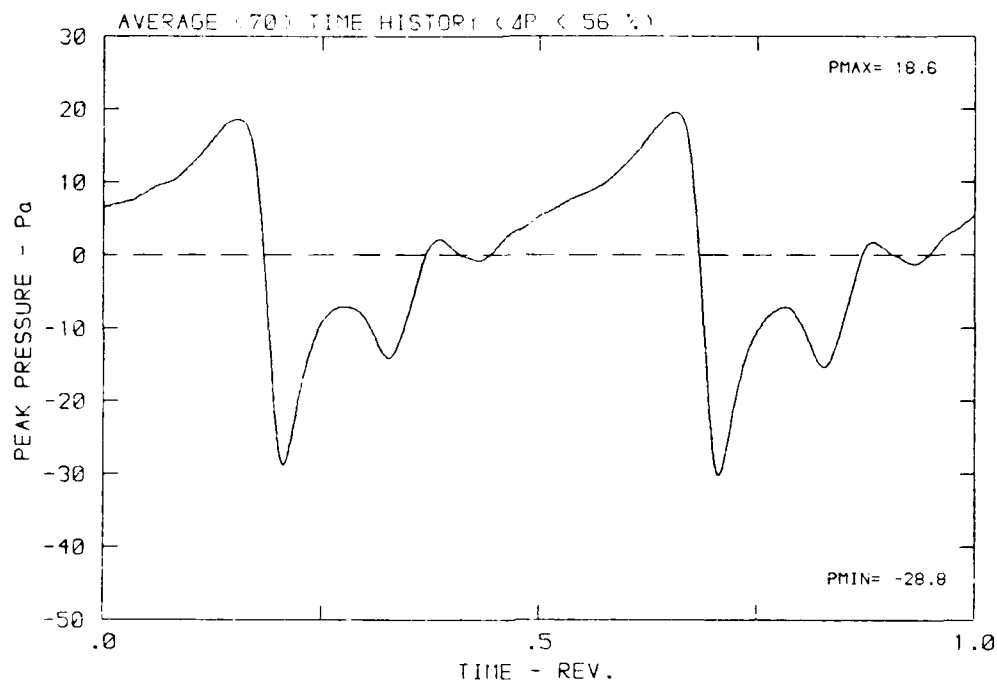
DATA POINT: GN-2 RUN: 152 MP: 5

β : 19.9° MH: .7664 n: 2400 rpm v/u : .202 ϕ : -7.4° T: 287.5 K



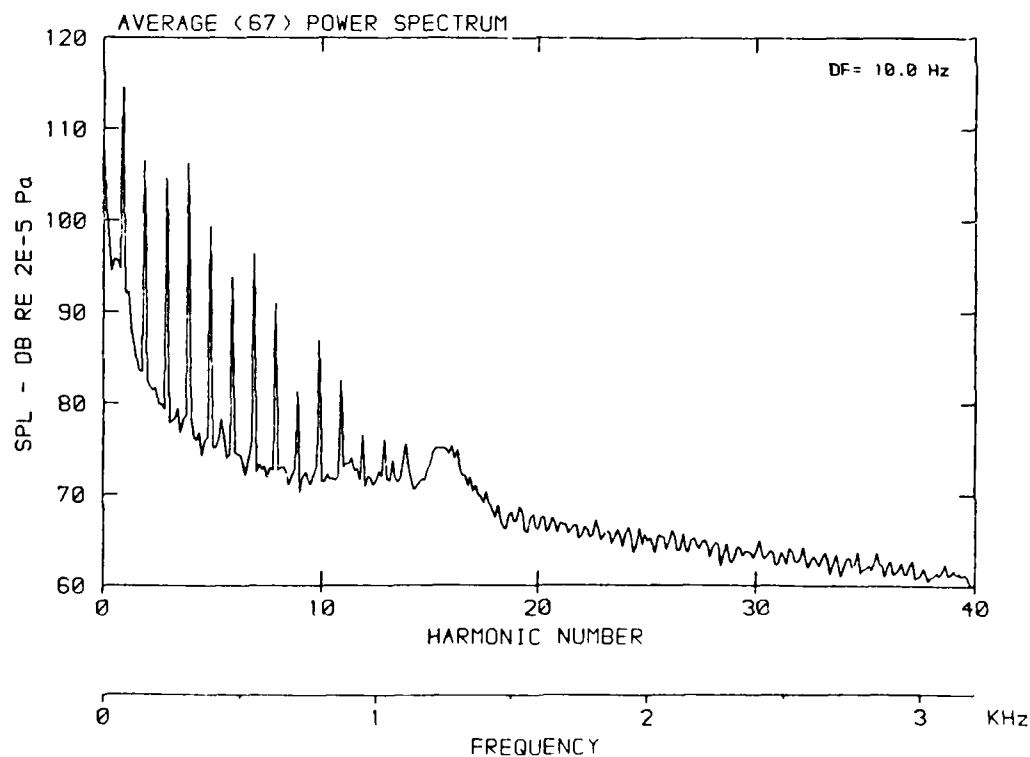
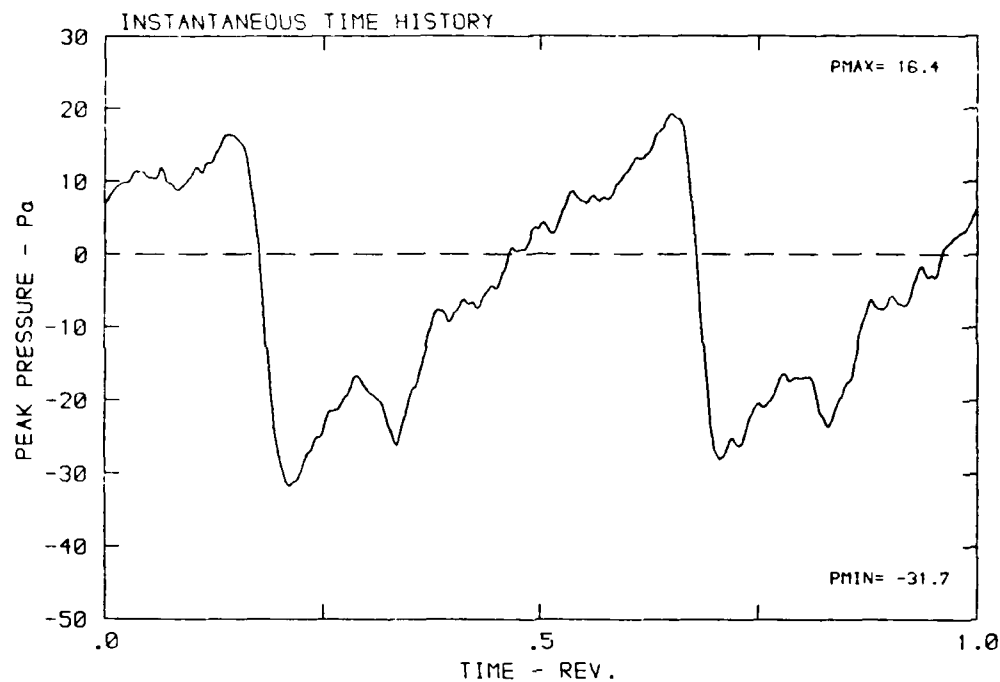
DATA POINT: GN-2 RUN: 152 MP: 5

β : 19.9° MH: .7664 n: 2400 rpm v/u: .202 ϕ : -7.4° T: 287.5 K



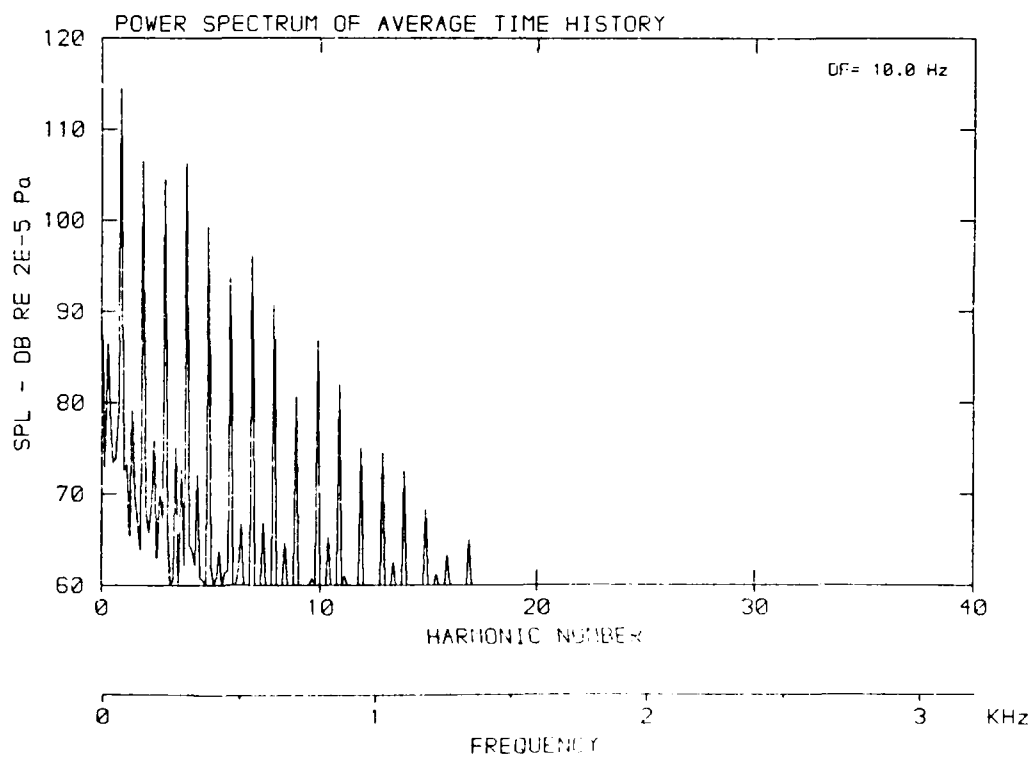
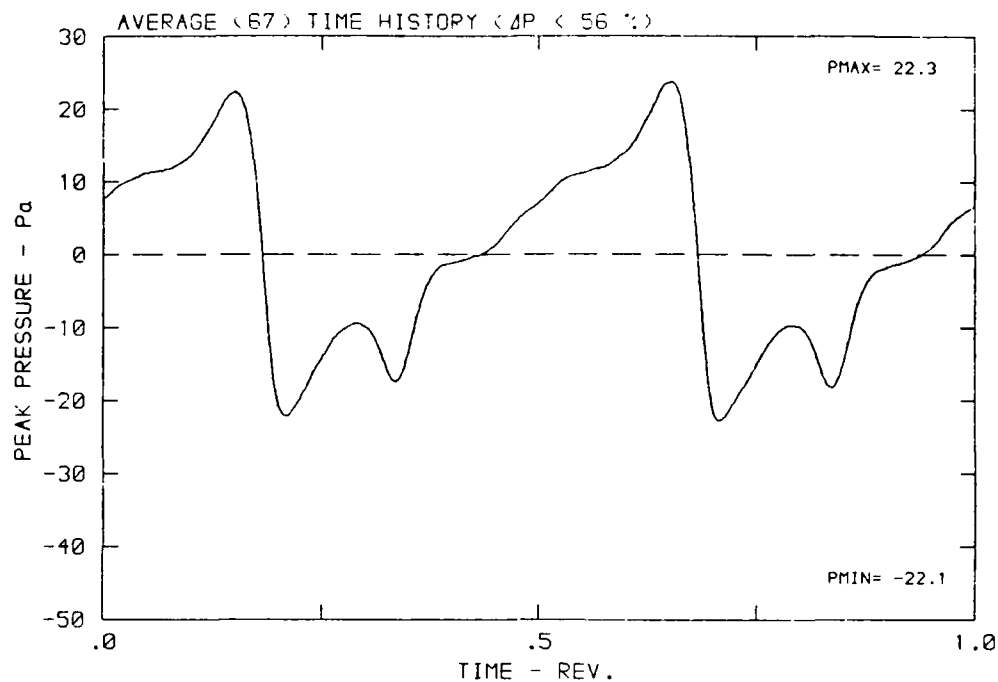
DATA POINT: GN-2 RUN: 152 MP: 6

β : 19.9° MH: .7664 n: 2400 rpm v/u: .202 ϕ : -7.4° T: 287.5 K



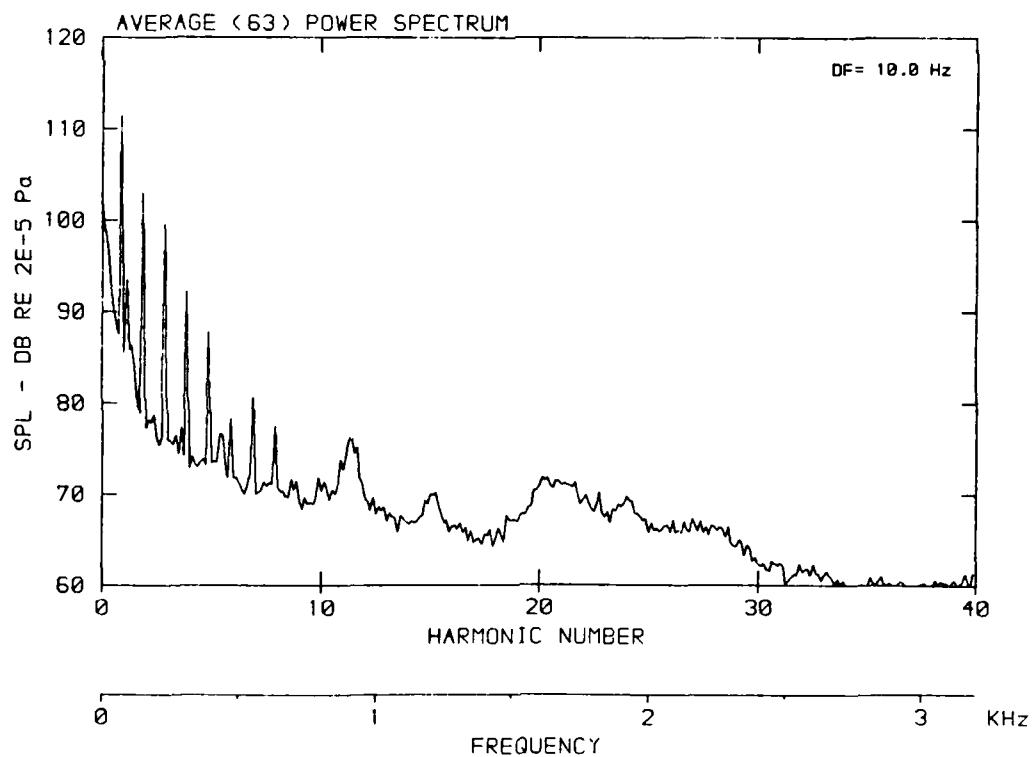
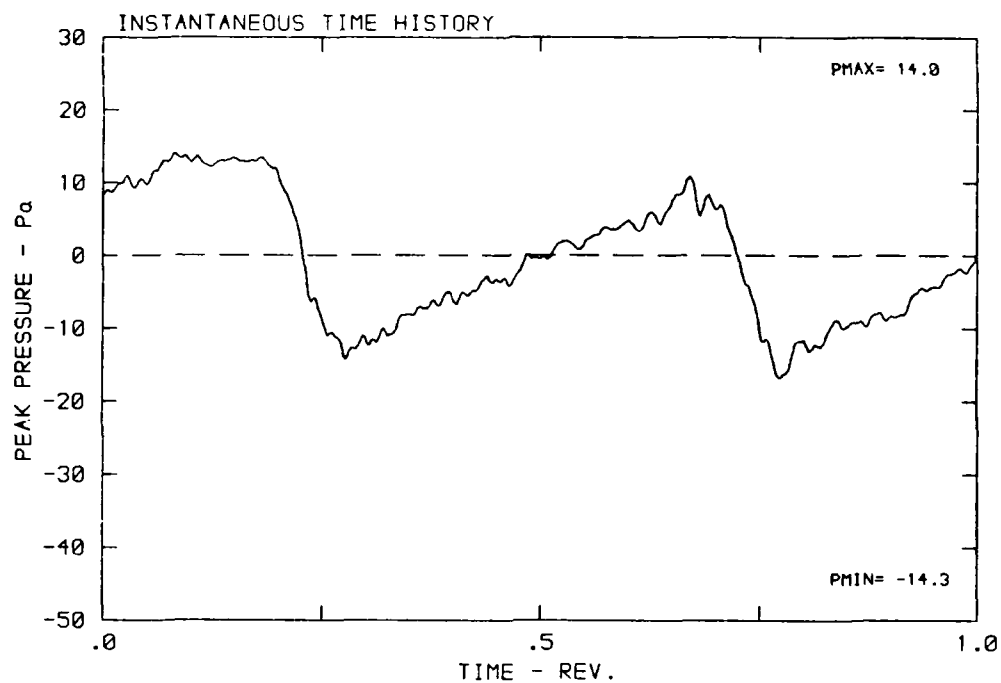
DATA POINT: GN-2 RUN: 152 MP: 6

β : 19.9° MH: .7664 n: 2400 rpm v/u: .202 ϕ : -7.4° T: 287.5 K



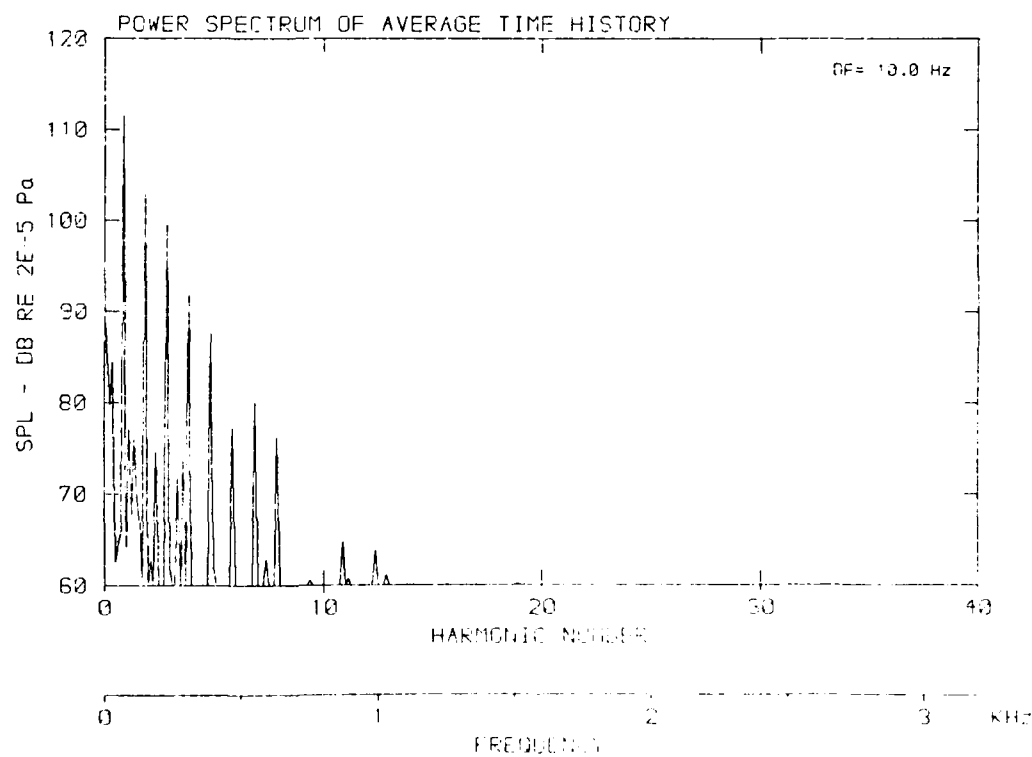
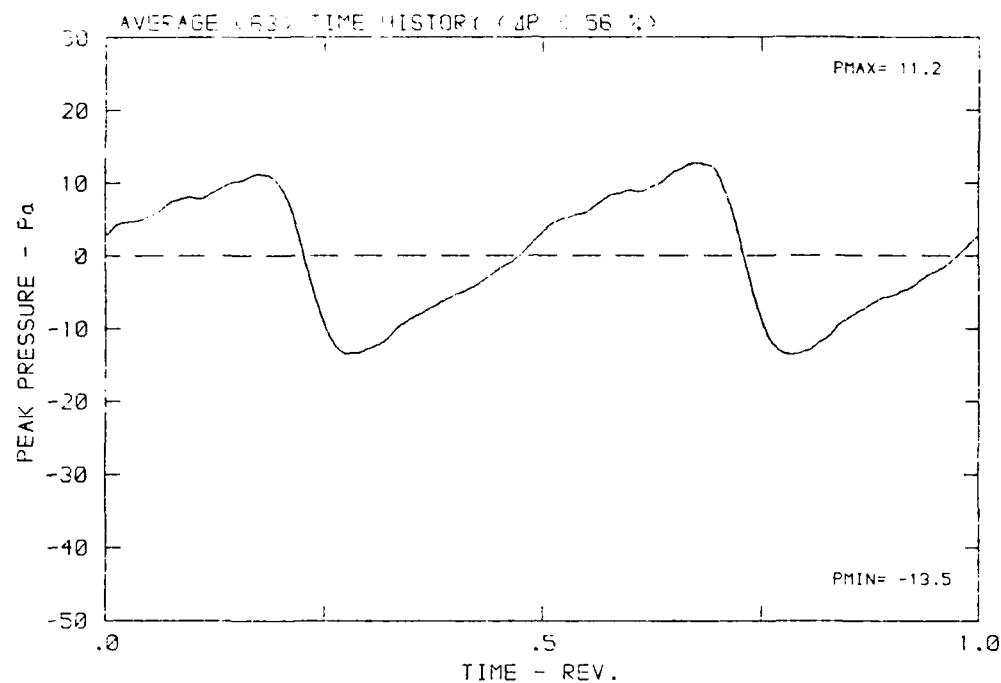
DATA POINT: GN-2 RUN: 152 MP: 7

β : 19.9° MH: .7664 n: 2400 rpm v/u : .202 ϕ : -7.4° T: 287.5 K



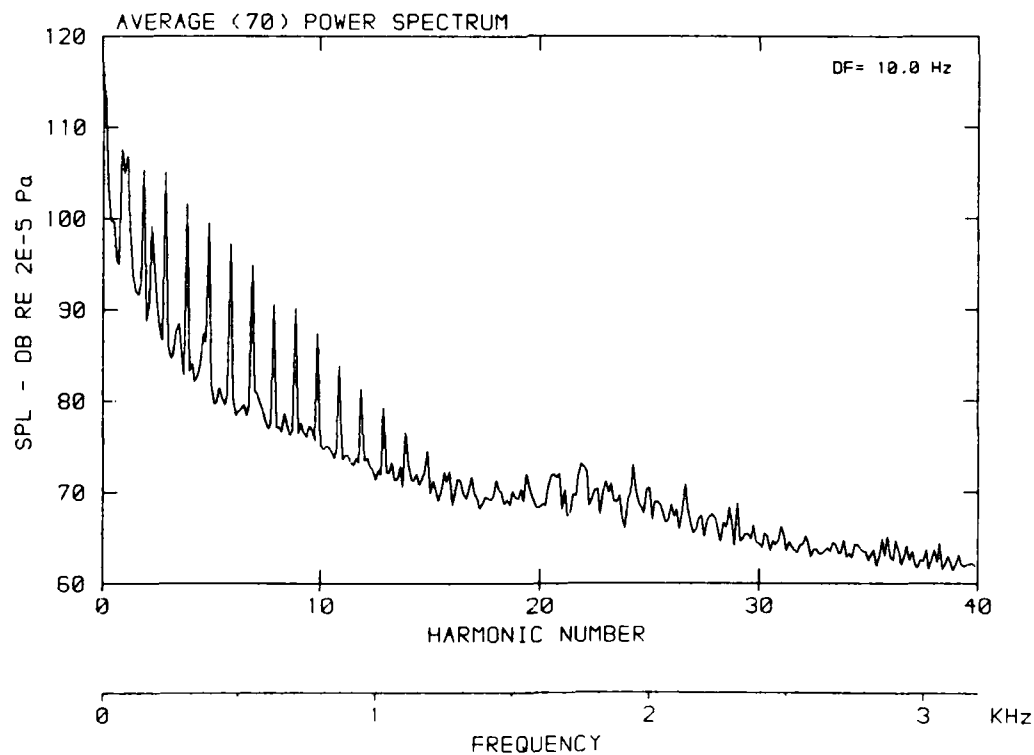
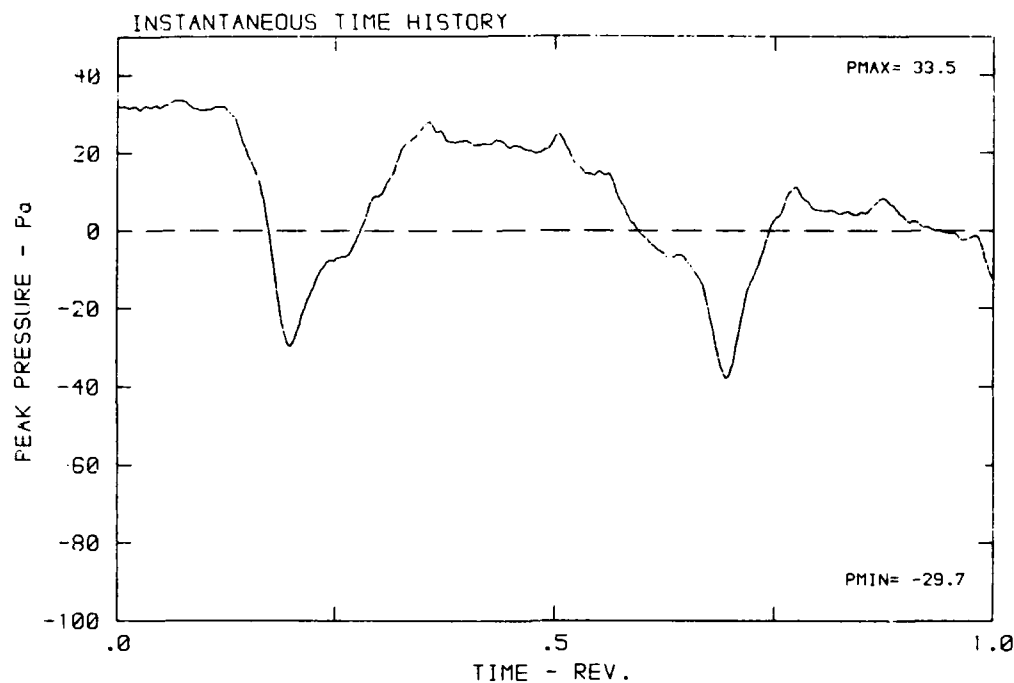
DATA POINT: 6H-2 RUN: 152 NP: 7

β : 19.9° RH: .7664 n: 2400 rpm vru: .202 ϕ : -7.4° T: 287.5 K



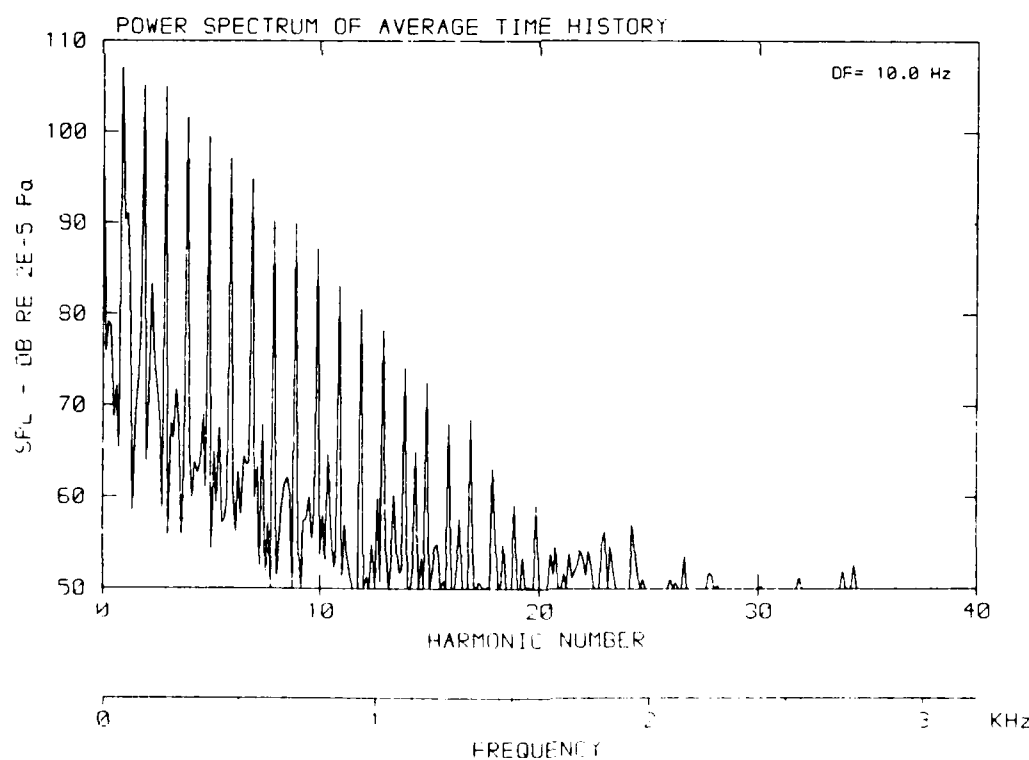
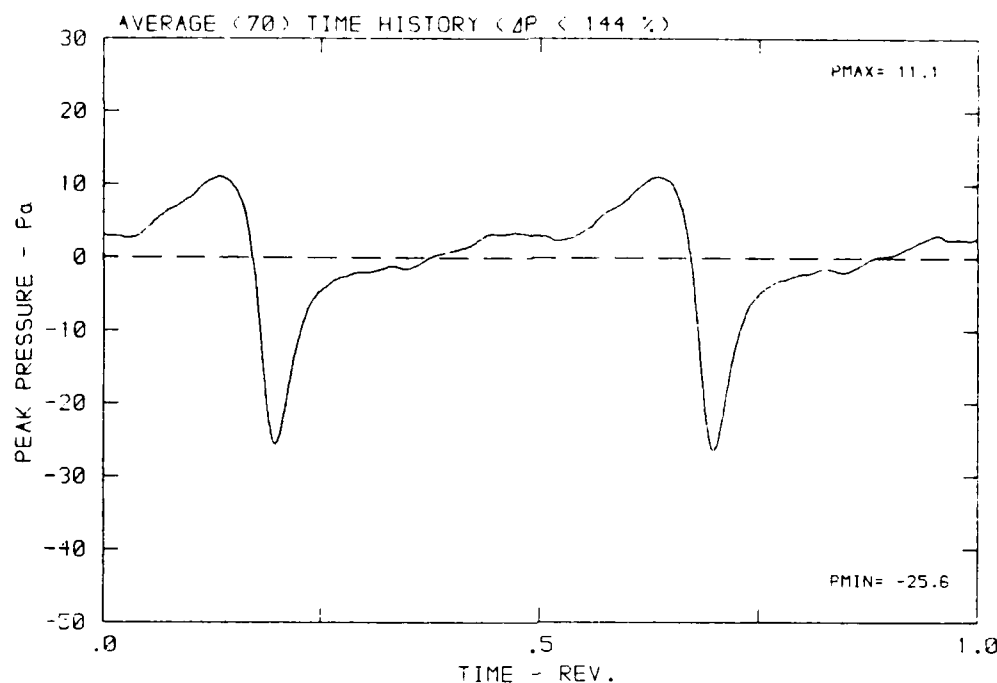
DATA POINT: GN-2 RUN: 152 MP: 8

β : 19.9° MH: .7664 n: 2400 rpm v/u : .202 ϕ : -7.4° T: 287.5 K



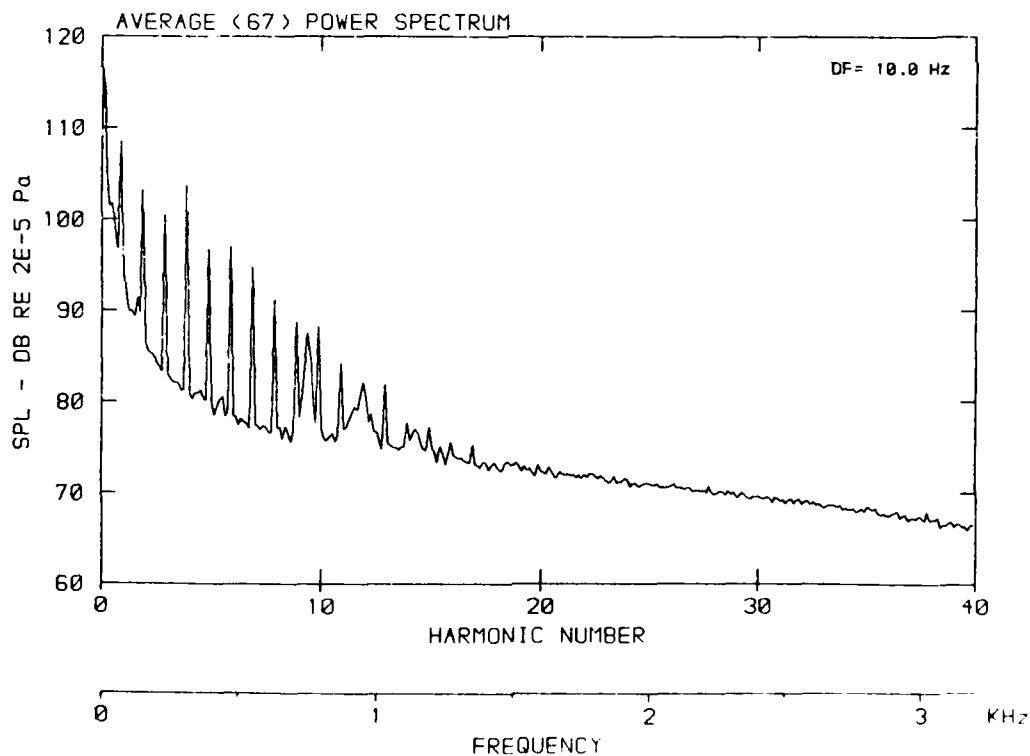
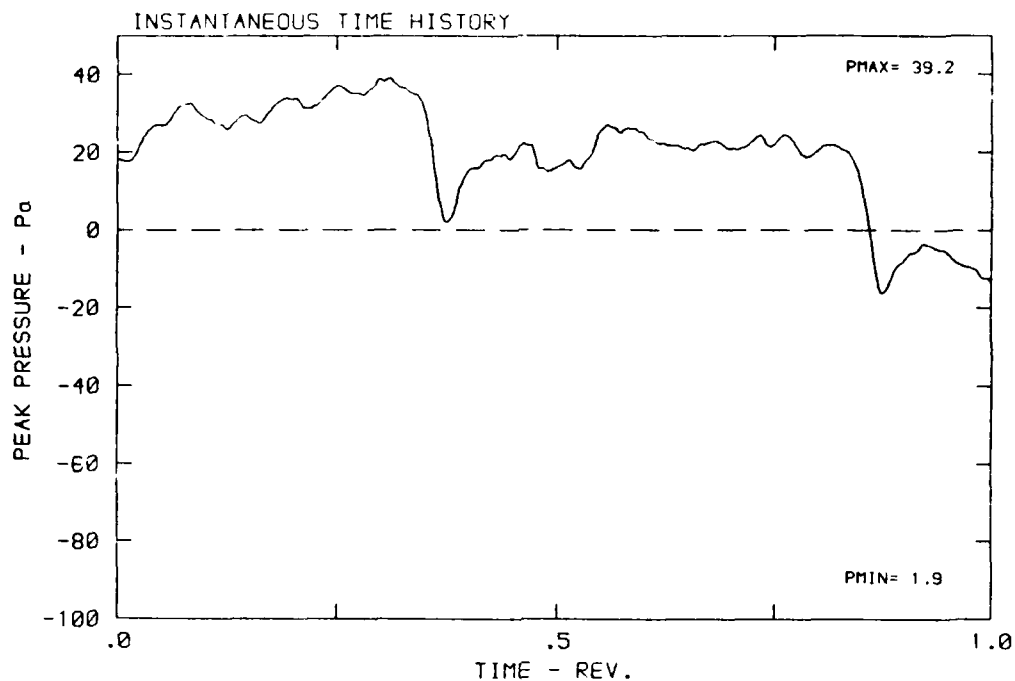
DATA POINT : GN-2 RUN : 152 MP : 8

β : 19.9° MH : .7664 n : 2400 rpm v/u : .202 ϕ : -7.4° T : 287.5 K



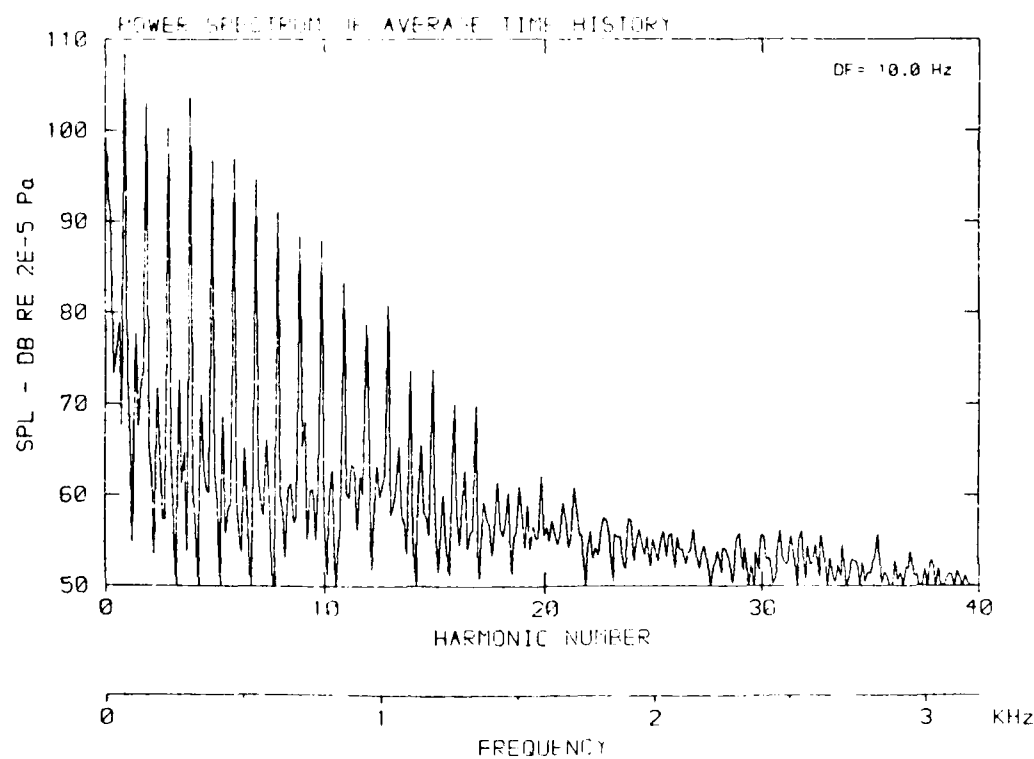
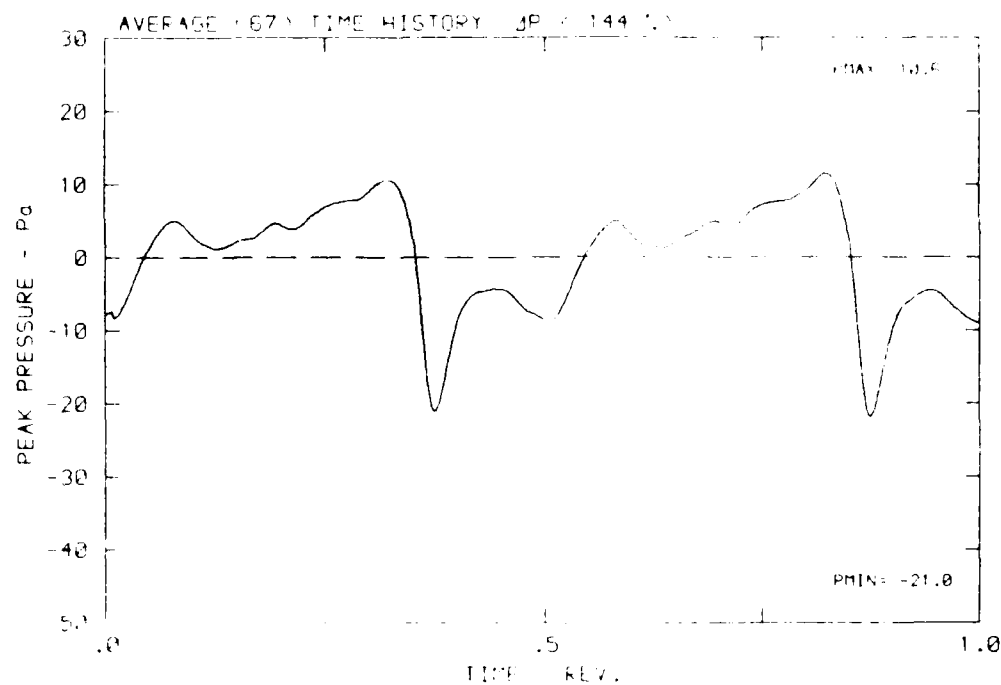
DATA POINT: GN-2 RUN: 152 MP: 9

β : 19.9° NH: .7664 n: 2400 rpm v/u: .202 ϕ : -7.4° T: 287.5 K



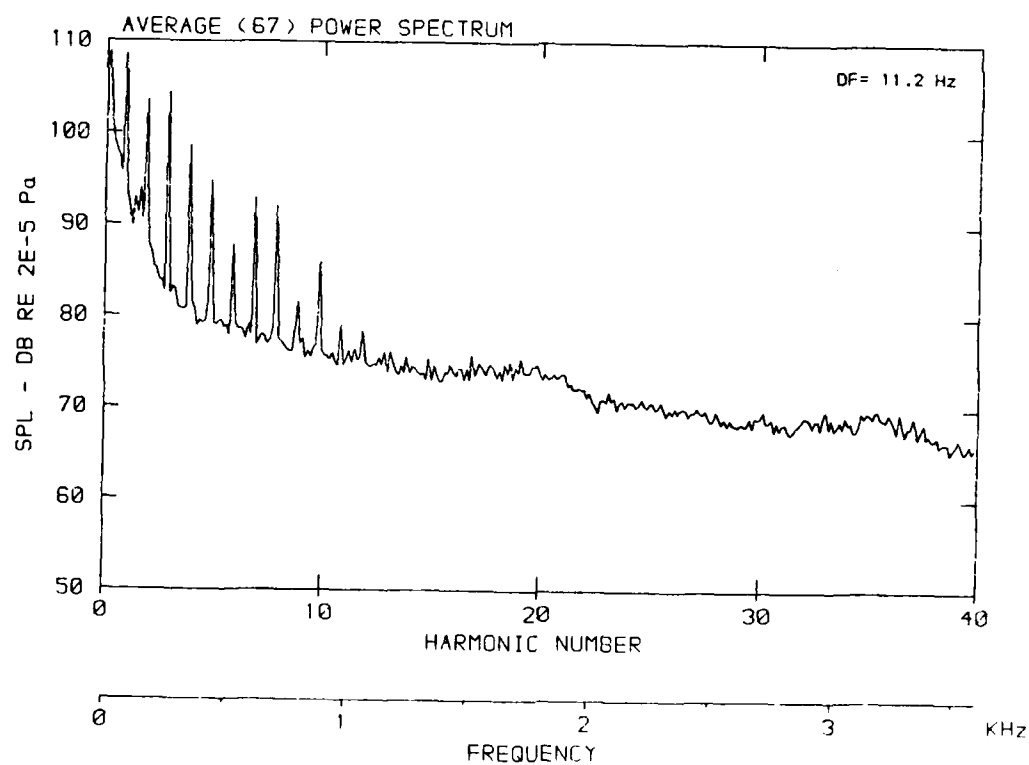
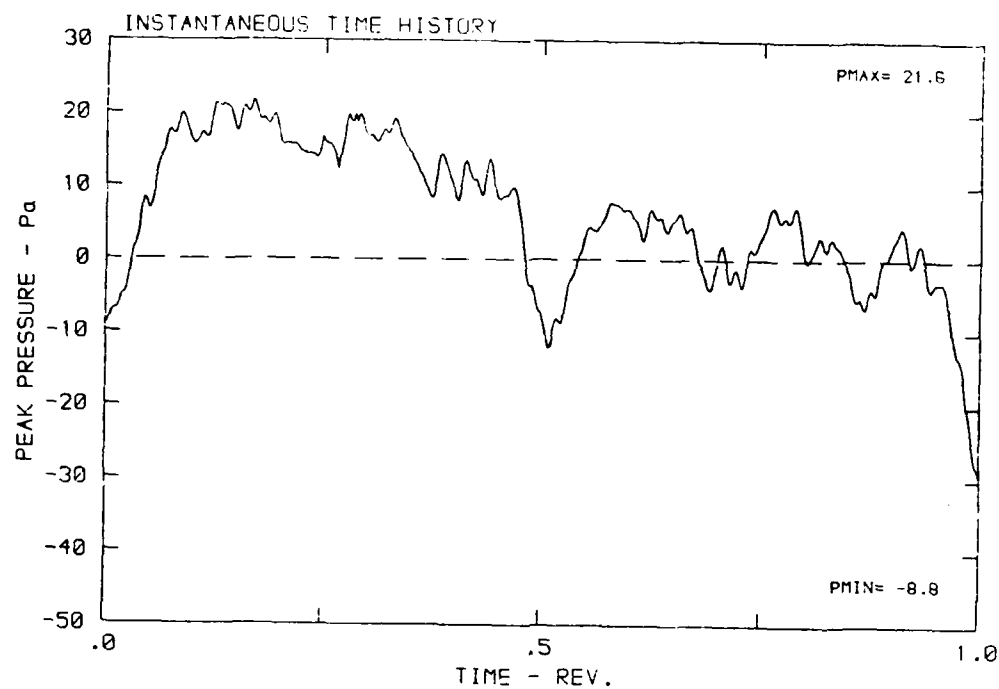
DATA POINT: GN-2 RUN: 152 MP: 9

β : 19.9° MH: .7664 n: 2400 rpm v -u: .202 ϕ : -7.4° T: 287.5 K



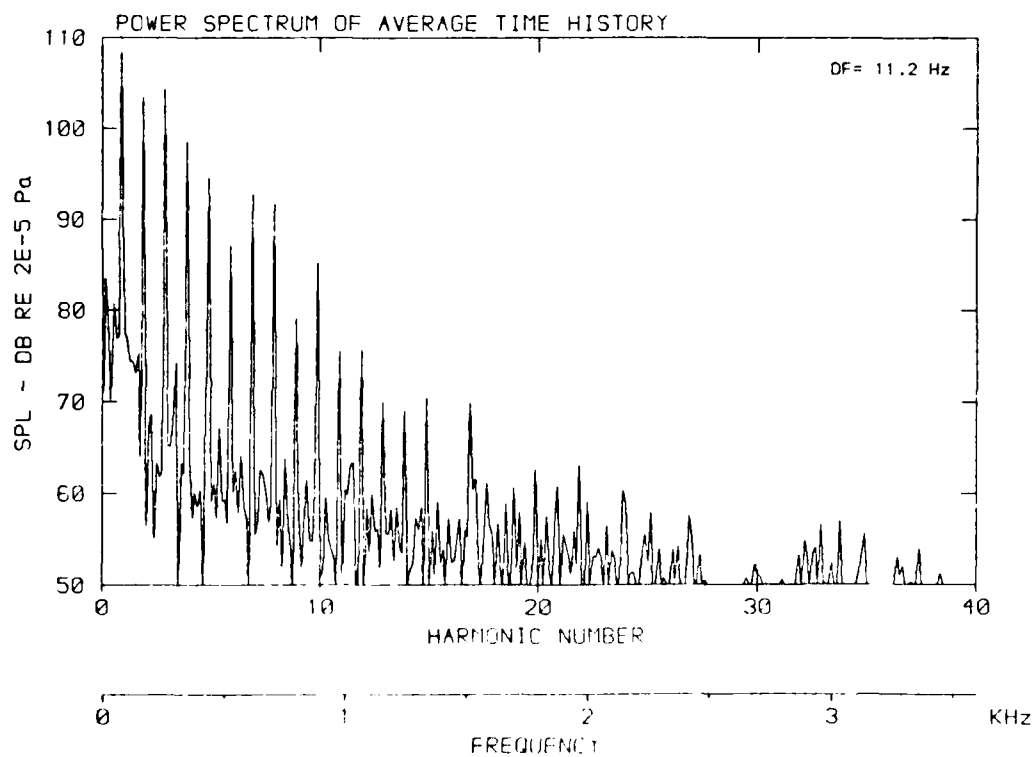
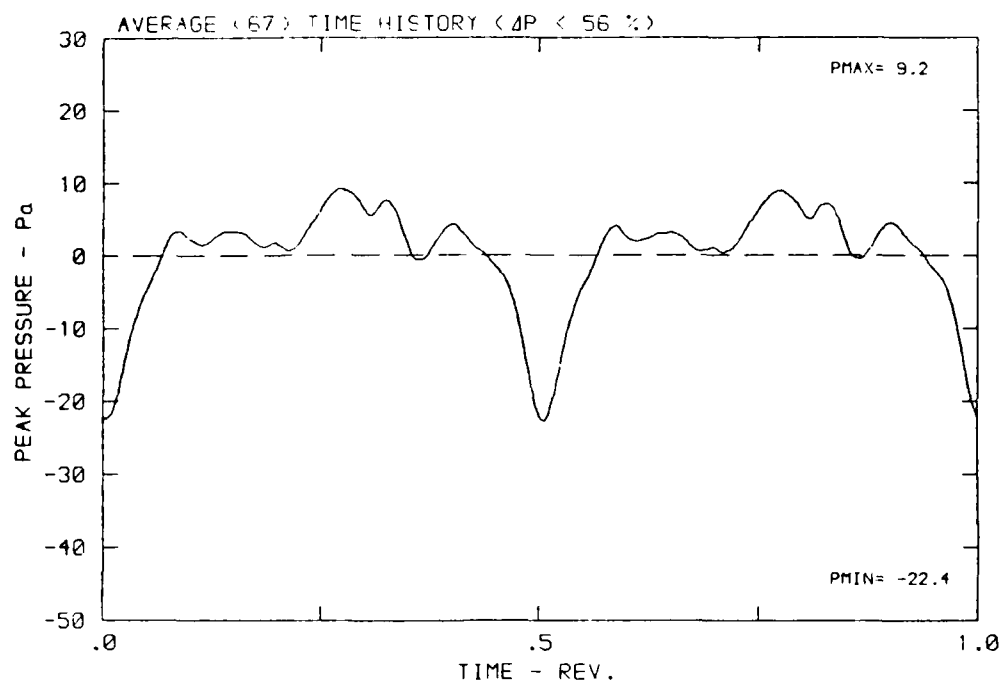
DATA POINT: GN-3 RUN: 153 MP: 1

β : 19.9° MH: .8735 n: 2700 rpm γ : .268 ϕ : -7.4° T: 234.4



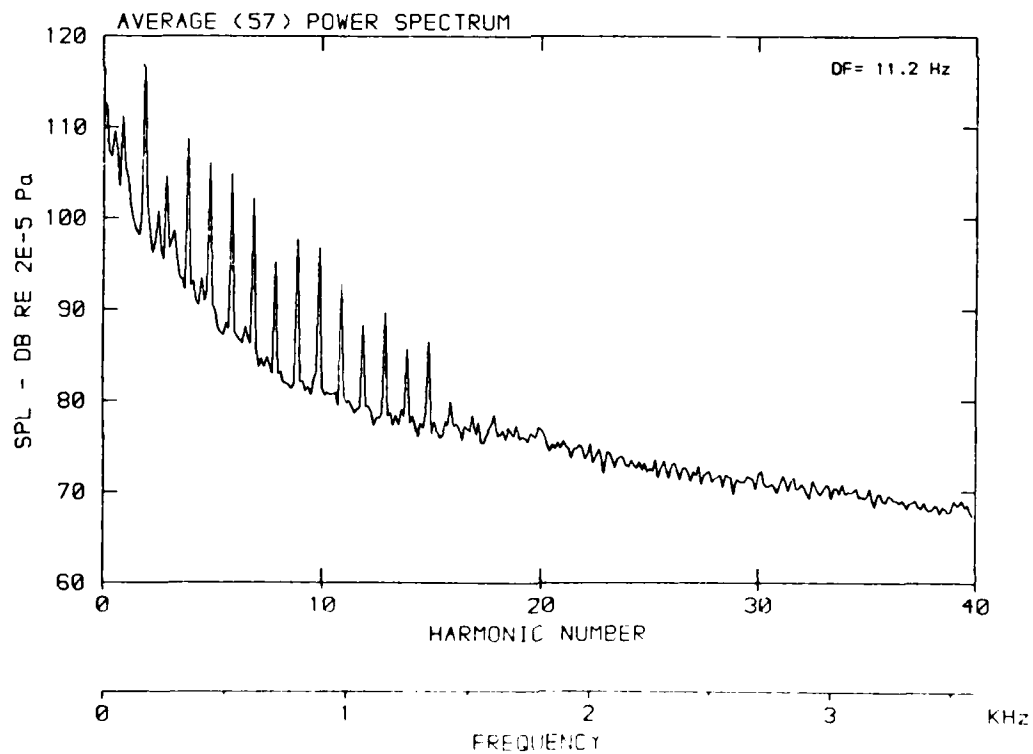
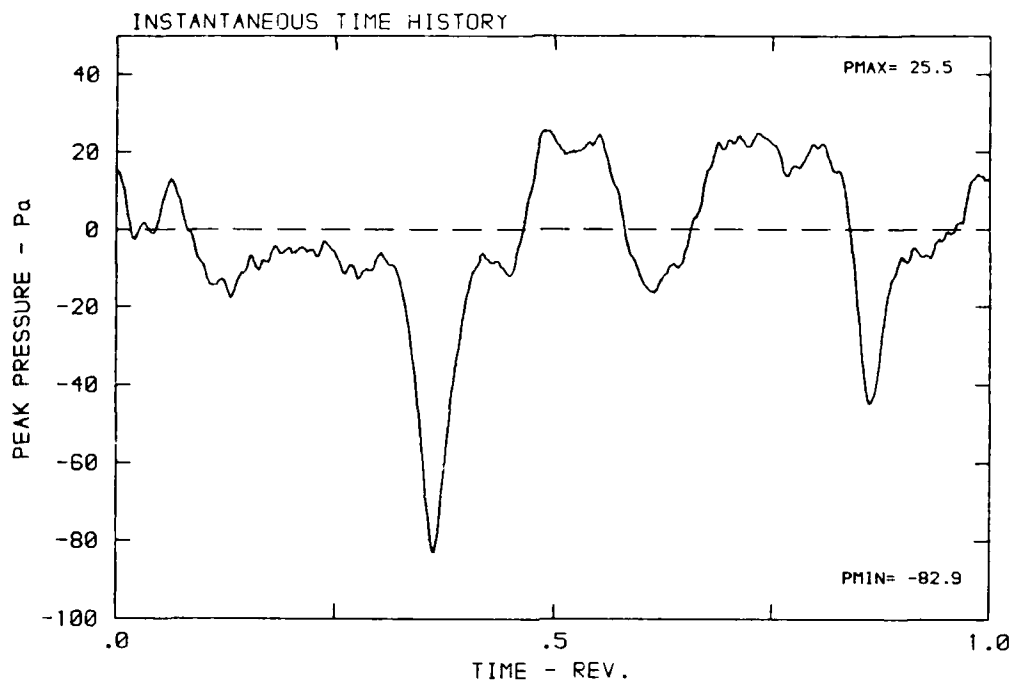
DATA POINT: GN-3 RUN: 153 MP: 1

β : 19.9° MH: .8735 n: 2700 rpm v/u : .268 ϕ : -7.4° T: 288.4 K



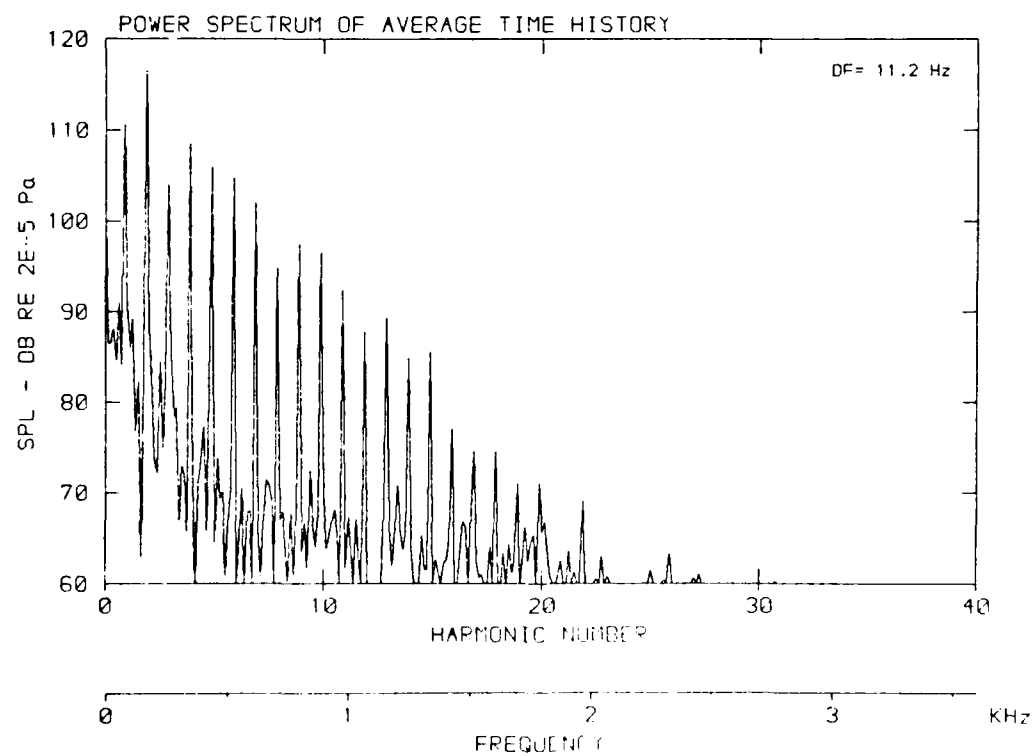
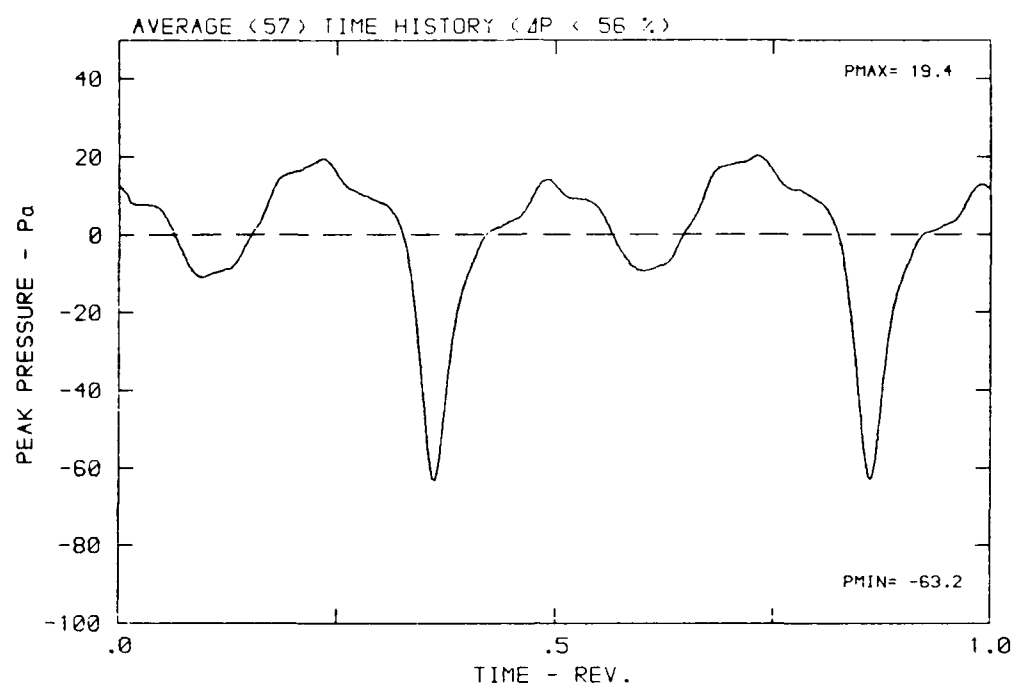
DATA POINT: GN-3 RUN: 153 MP: 2

β : 19.9° MH: .8735 n: 2700 rpm v/u: .268 ϕ : -7.4° T: 288.4 K



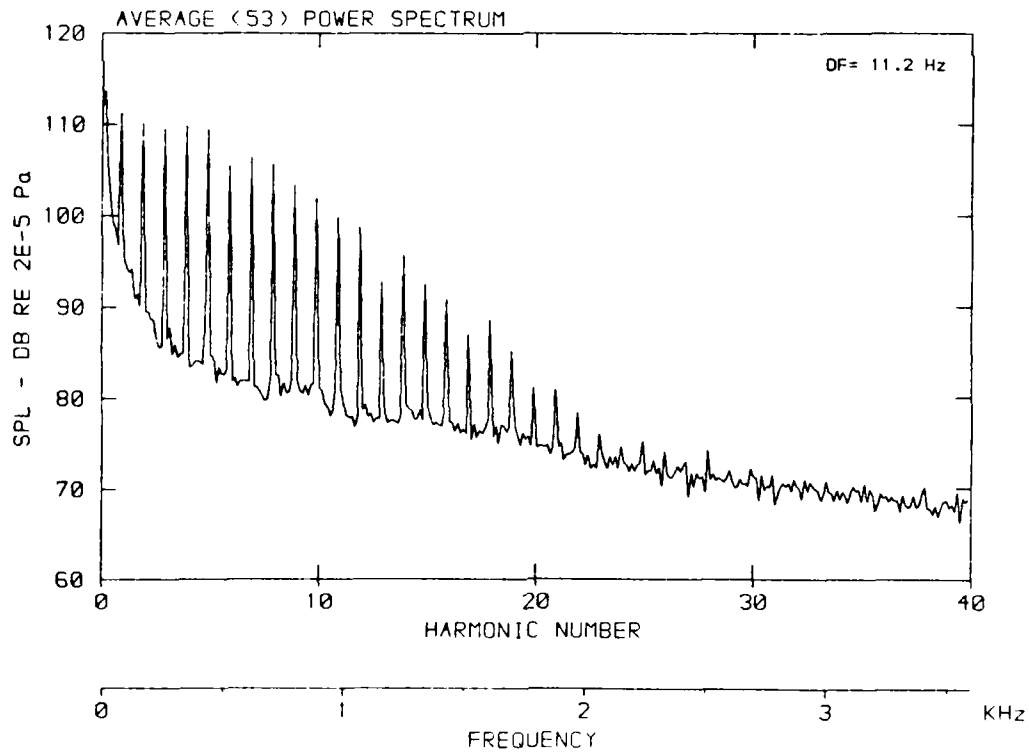
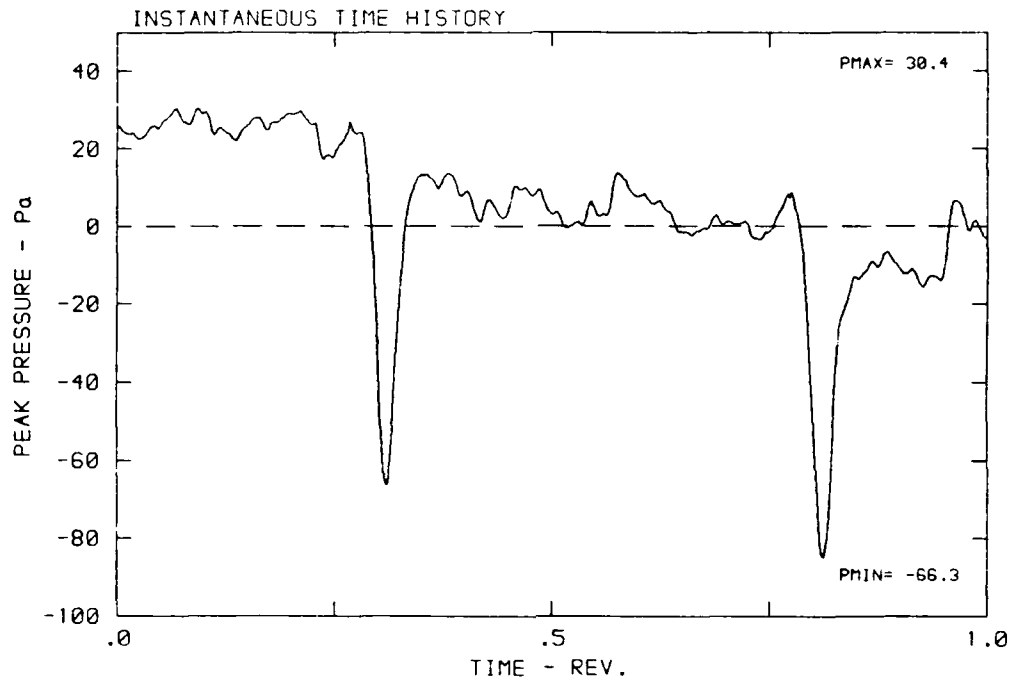
DATA POINT: GN-3 RUN: 153 MP: 2

β : 19.9° MH: .8735 n: 2700 rpm v/u : .268 ϕ : -7.4° T: 288.4 K



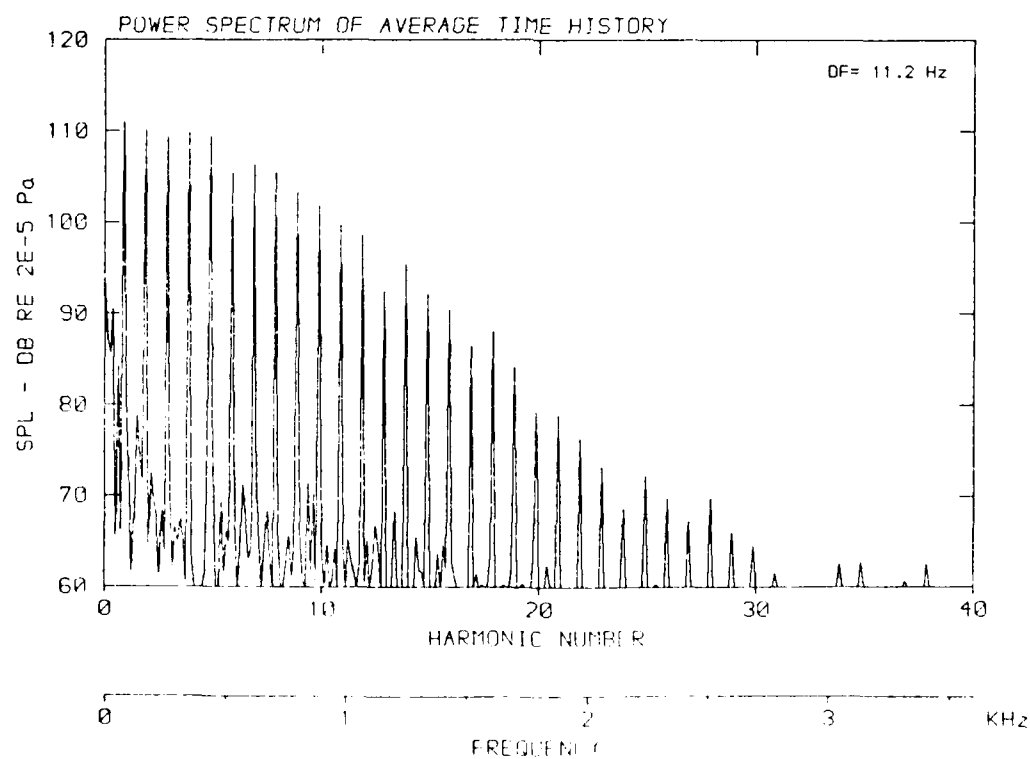
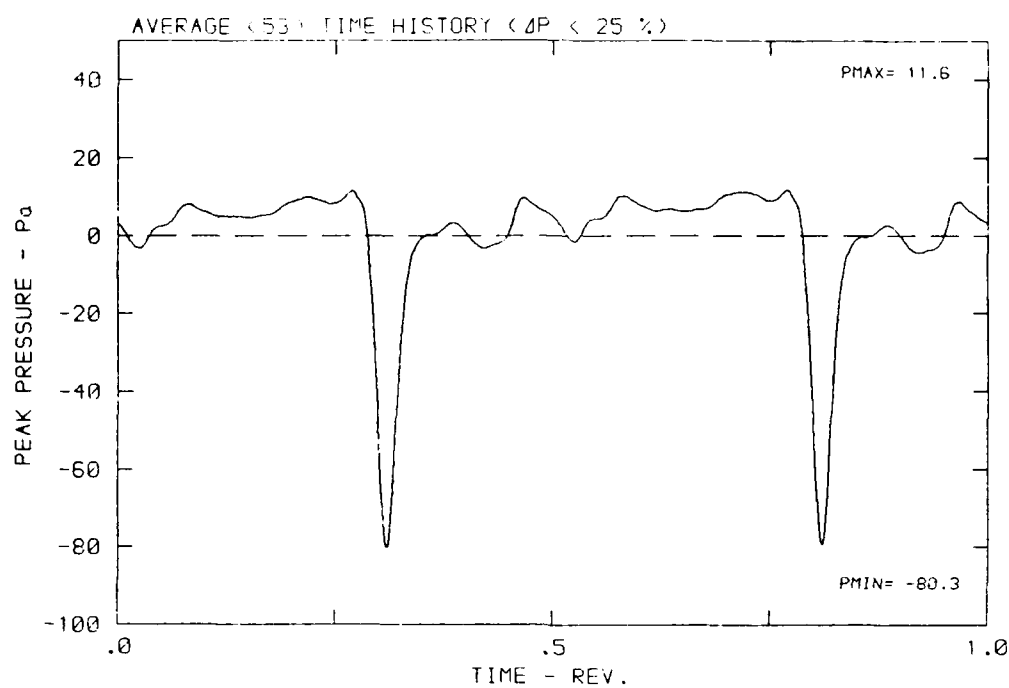
DATA POINT: GN-3 RUN: 153 MP: 3

β : 19.9° MH: .8735 n: 2700 rpm v/u: .268 ϕ : -7.4° T: 288.4 K



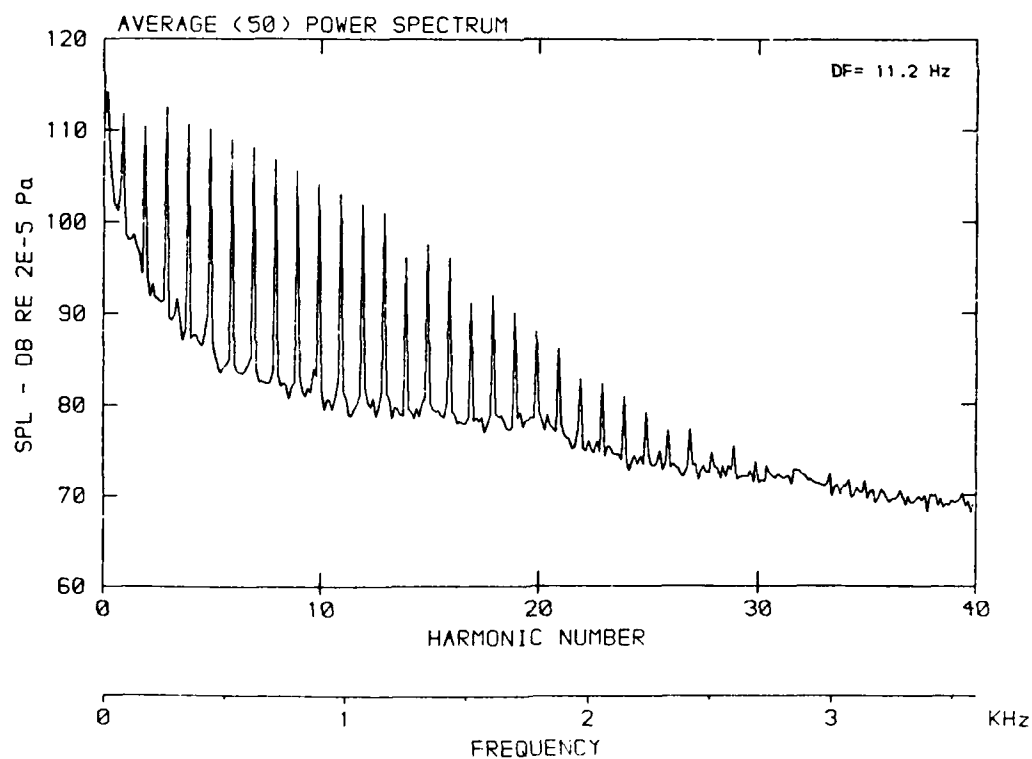
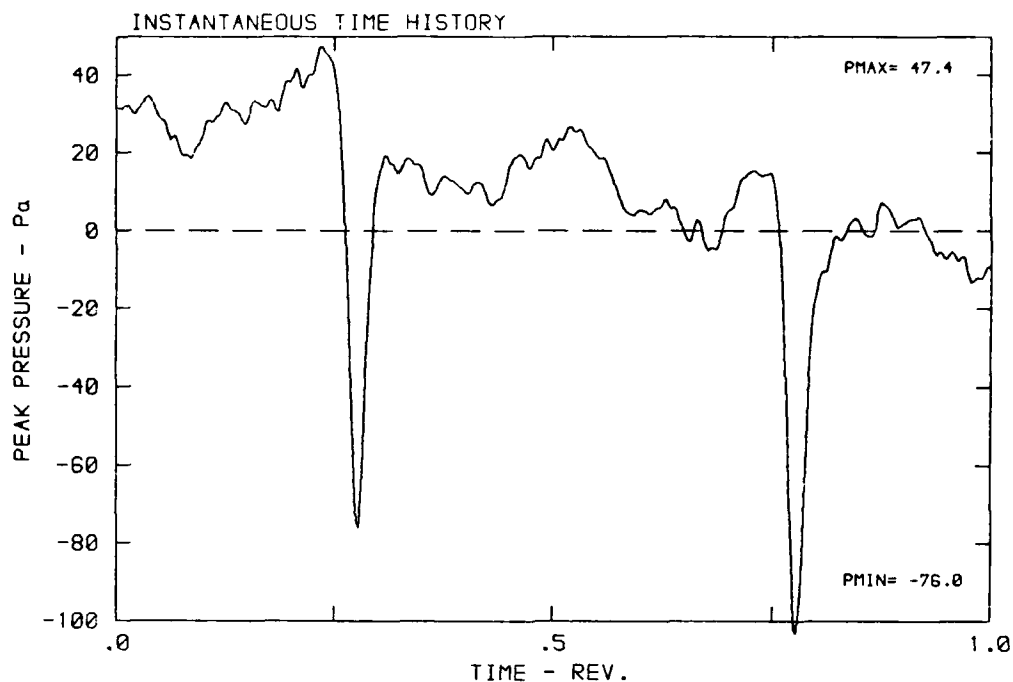
DATA POINT: GN-3 RUN: 153 MP: 3

β : 19.9° MH: .8735 n: 2700 rpm v/u: .268 ϕ : -7.4° T: 288.4 K



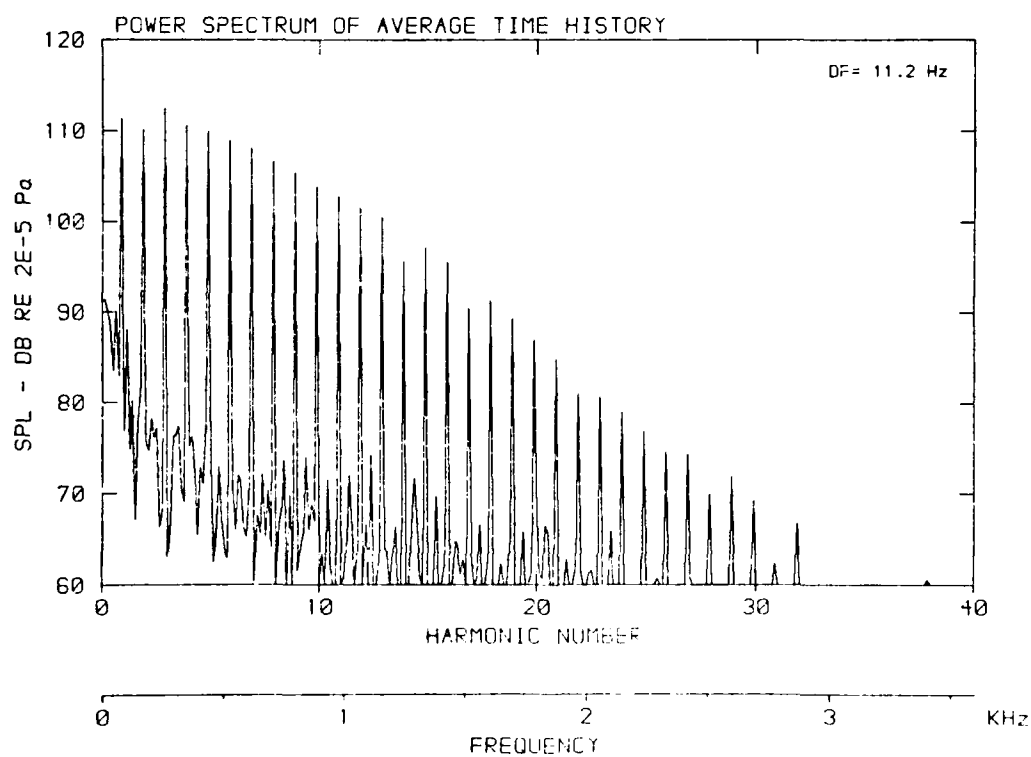
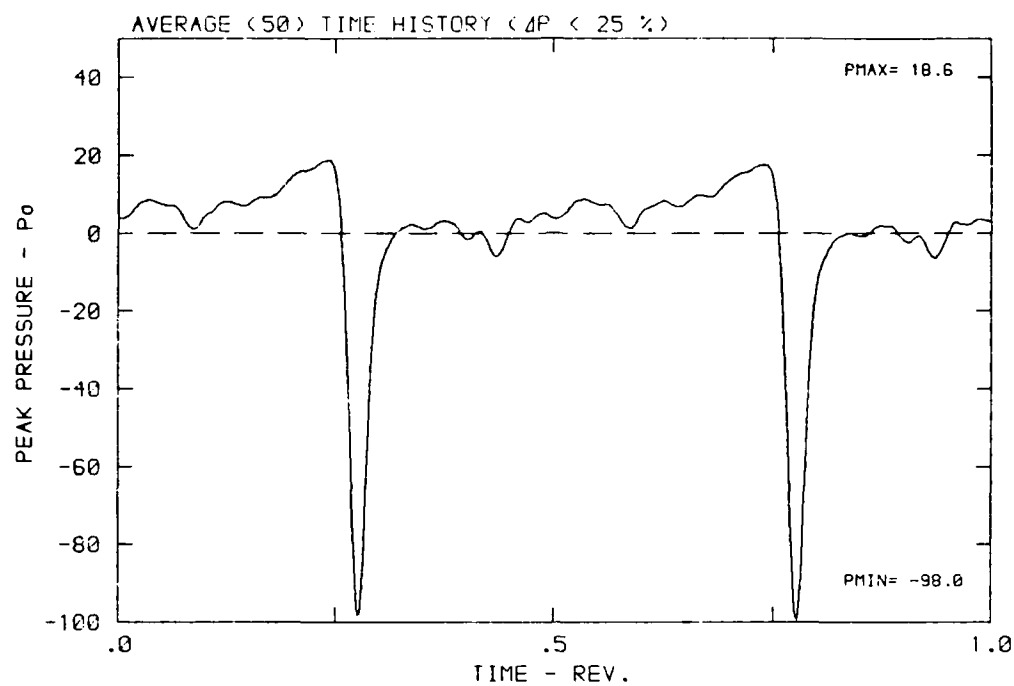
DATA POINT: GN-3 RUN: 153 MP: 4

β : 19.9° MH: .8735 n: 2700 rpm v/u: .268 ϕ : -7.4° T: 288.4 K



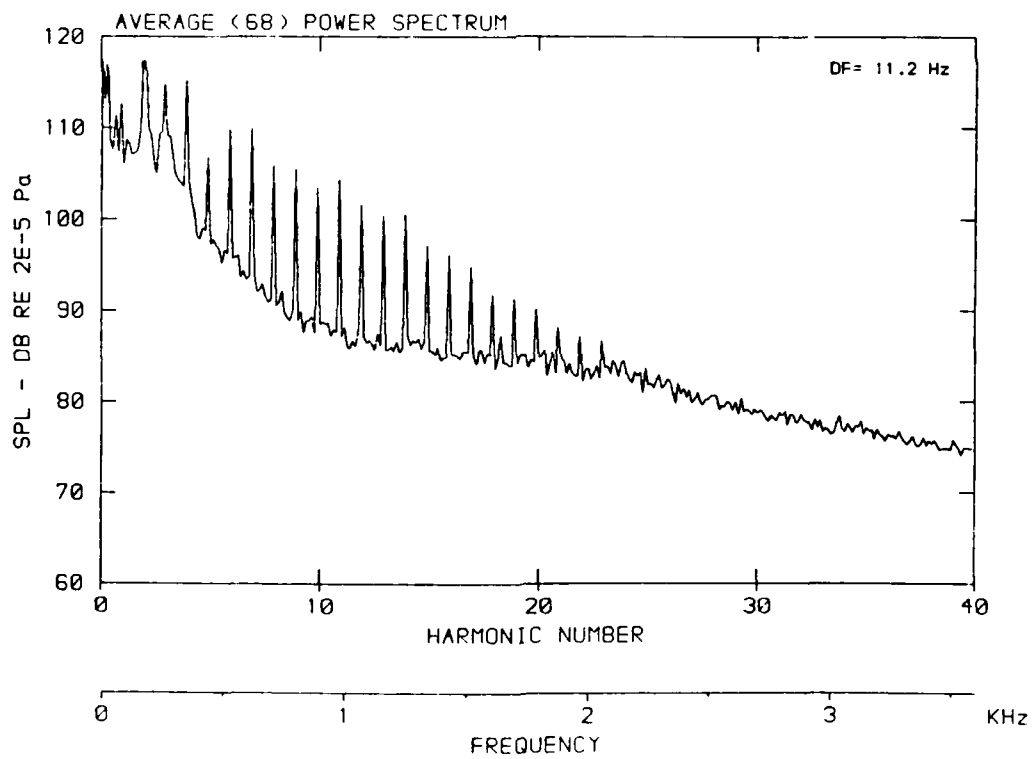
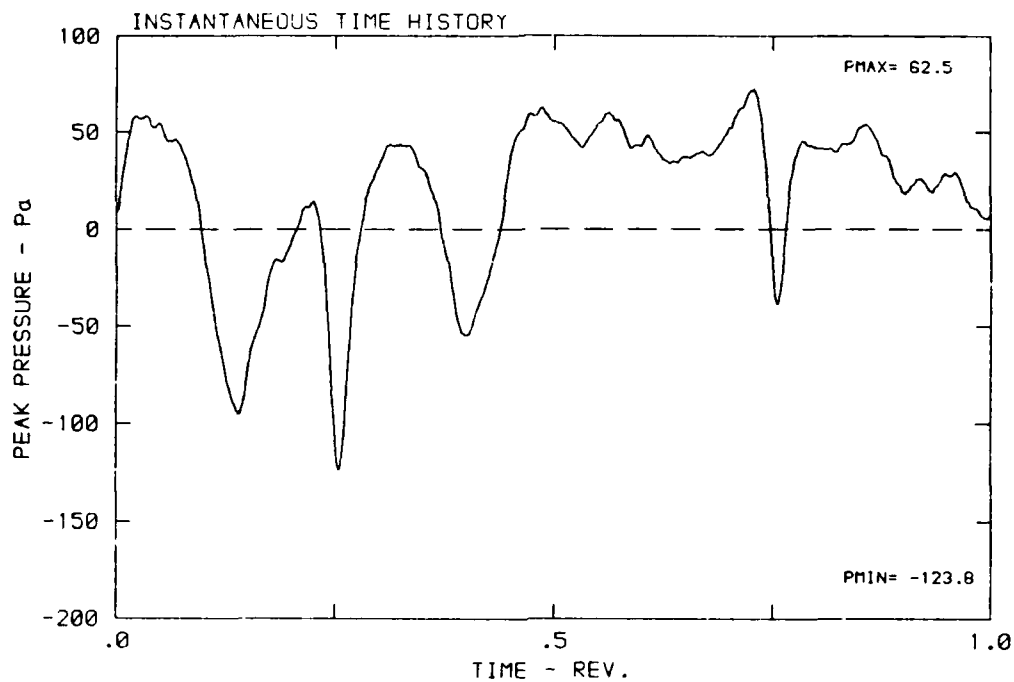
DATA POINT: GN-3 RUN: 153 MP: 4

β : 19.9° MH: .8735 n: 2700 rpm v/u : .268 ϕ : -7.4° T: 288.4 K



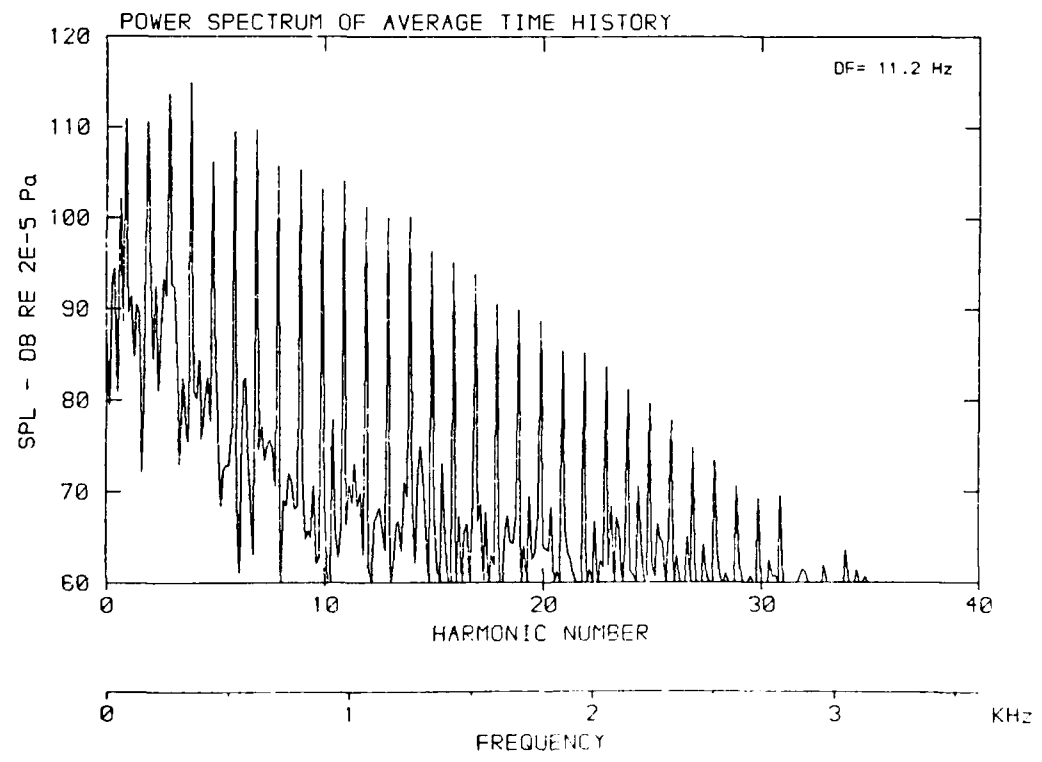
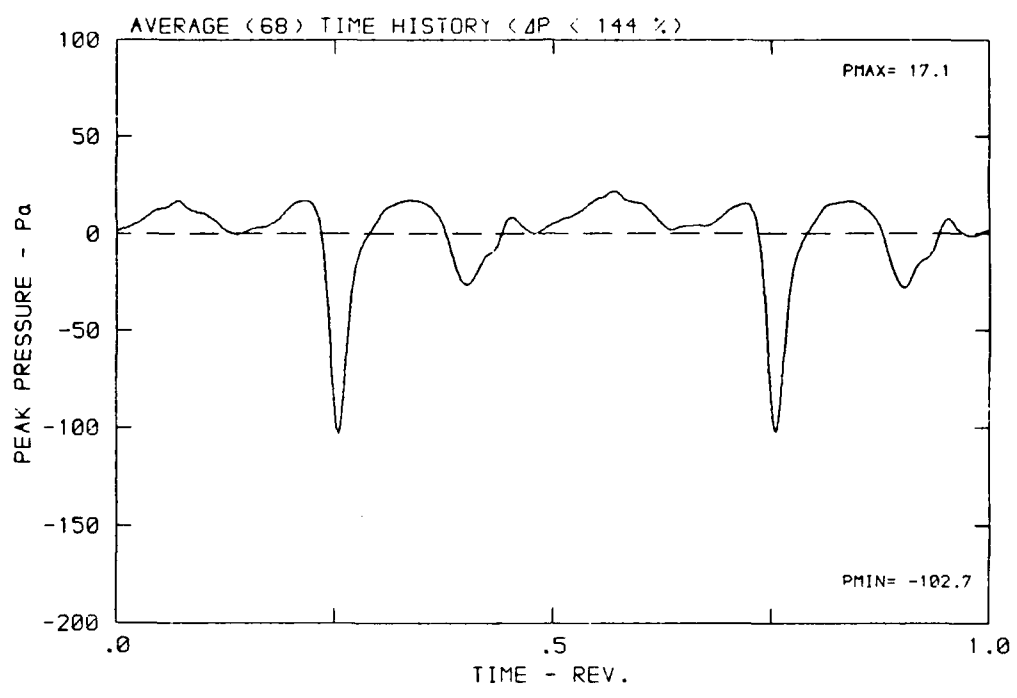
DATA POINT: GN-3 RUN: 153 MP: 5

β : 19.9° MH: .8735 n: 2700 rpm v/u : .268 ϕ : -7.4° T: 288.4 K



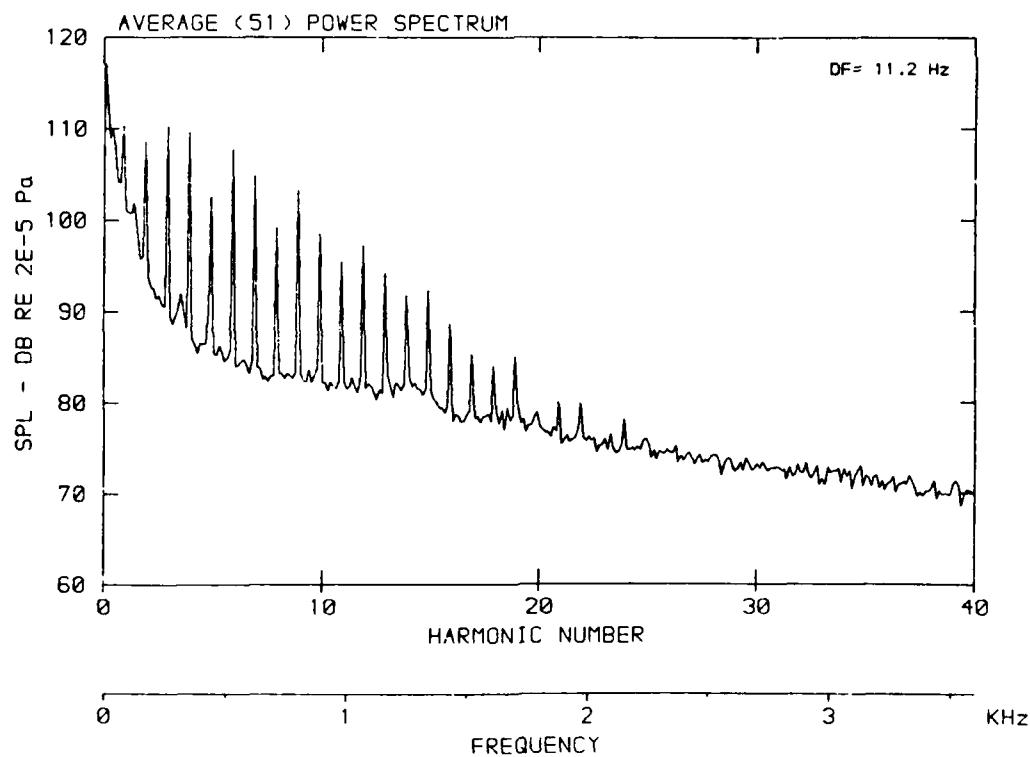
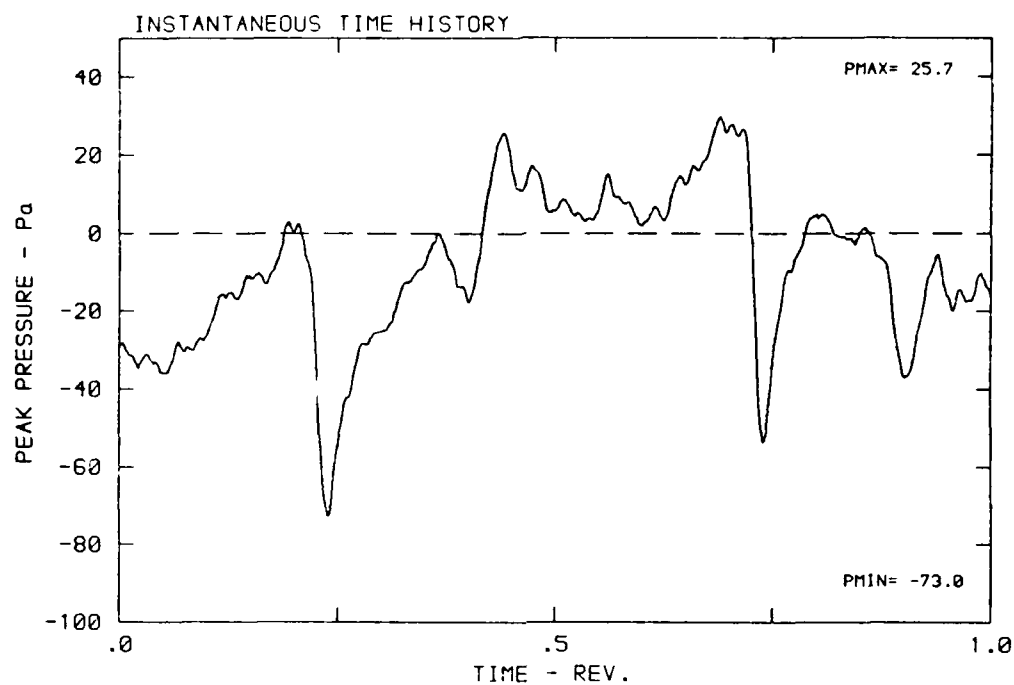
DATA POINT: GN-3 RUN: 153 MP: 5

β : 19.9° MH: .8735 n: 2700 rpm v/u : .268 ϕ : -7.4° T: 288.4 K



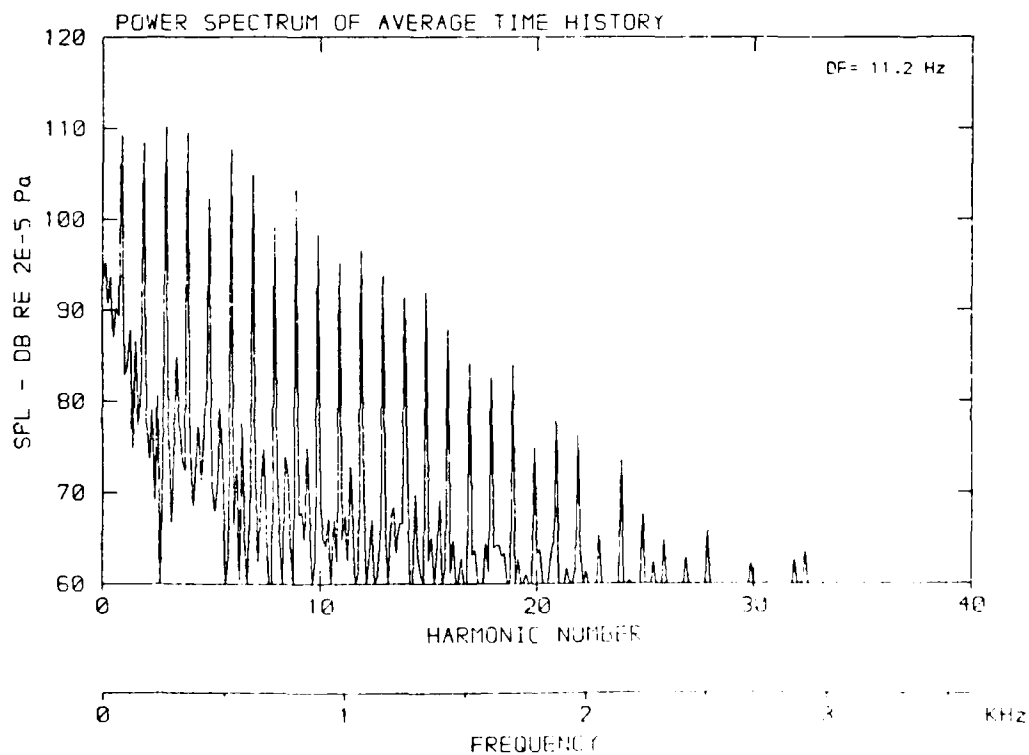
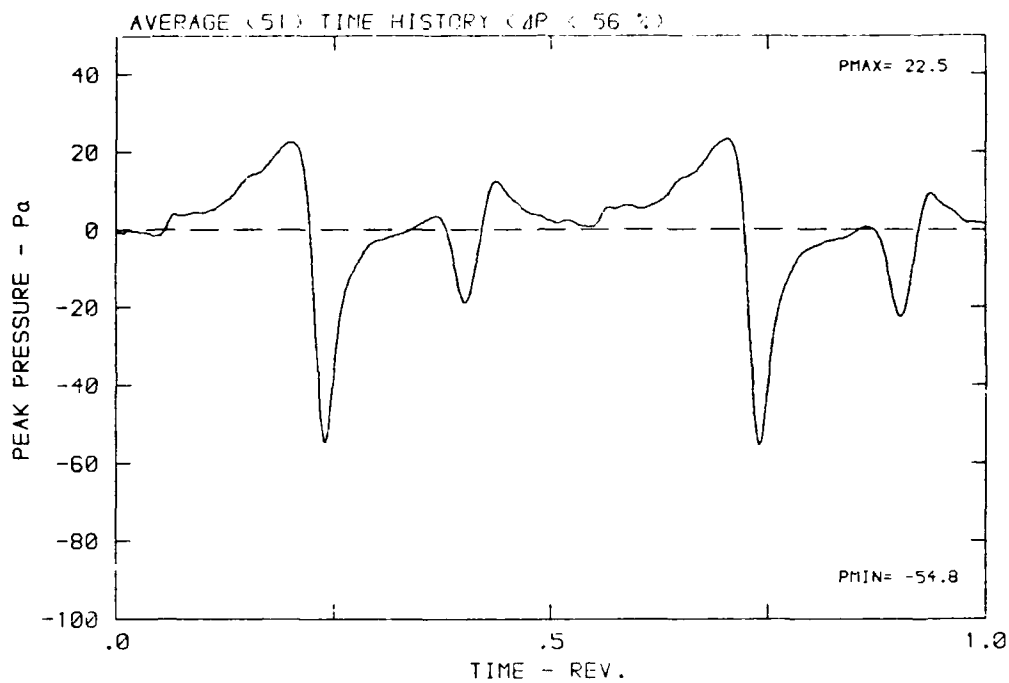
DATA POINT: GN-3 RUN: 153 MP: 6

β : 19.9° MH: .8735 n: 2700 rpm v/u : .268 ϕ : -7.4° T: 288.4 K



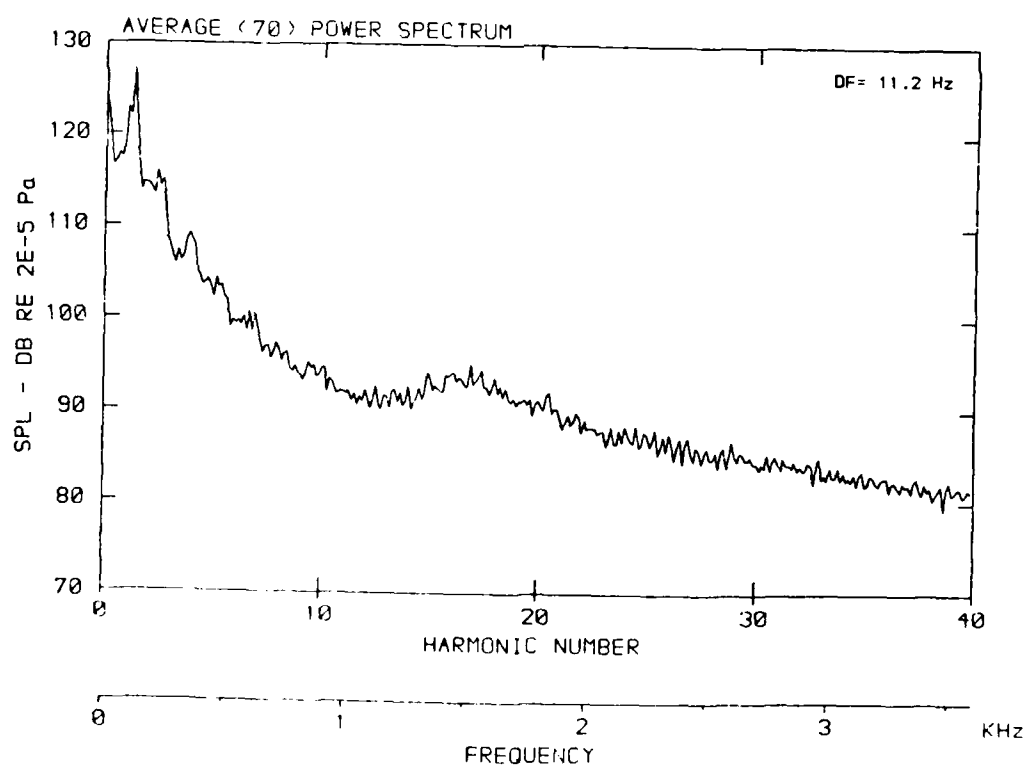
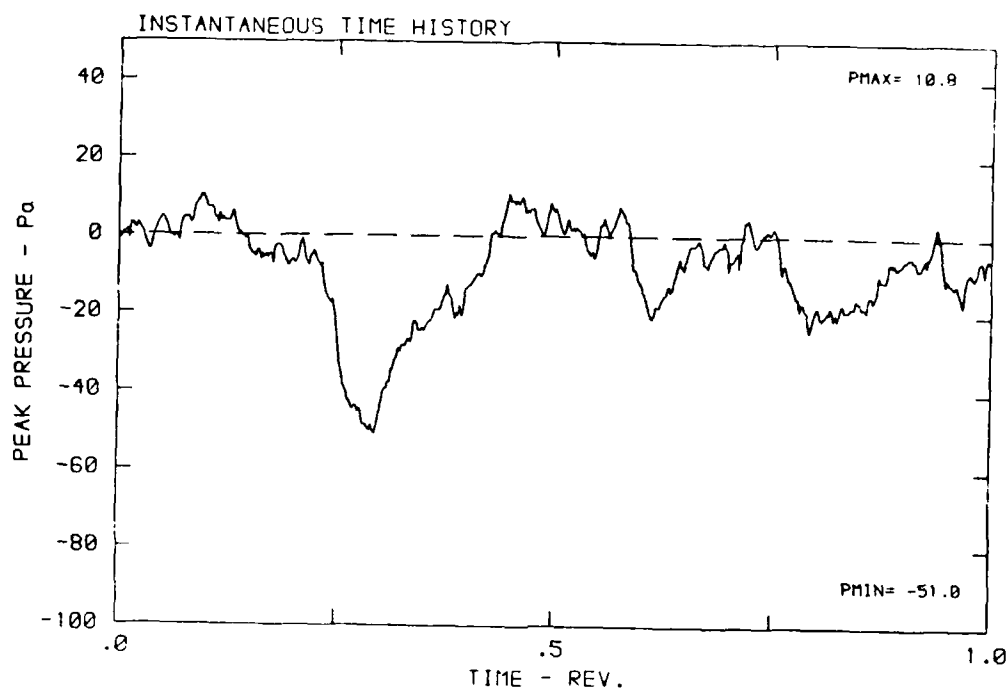
DATA POINT: GN-3 RUN: 153 MP: 6

β : 19.9° MH: .8735 n: 2700 rpm v/u : .268 ϕ : -7.4° T: 288.4 K



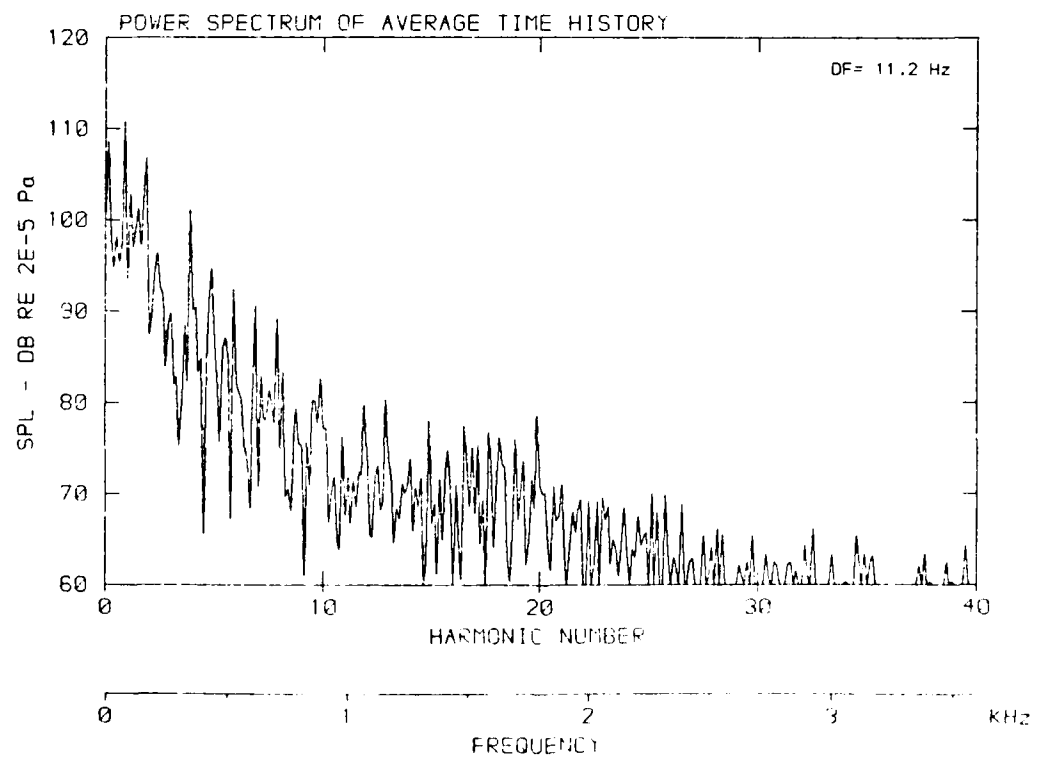
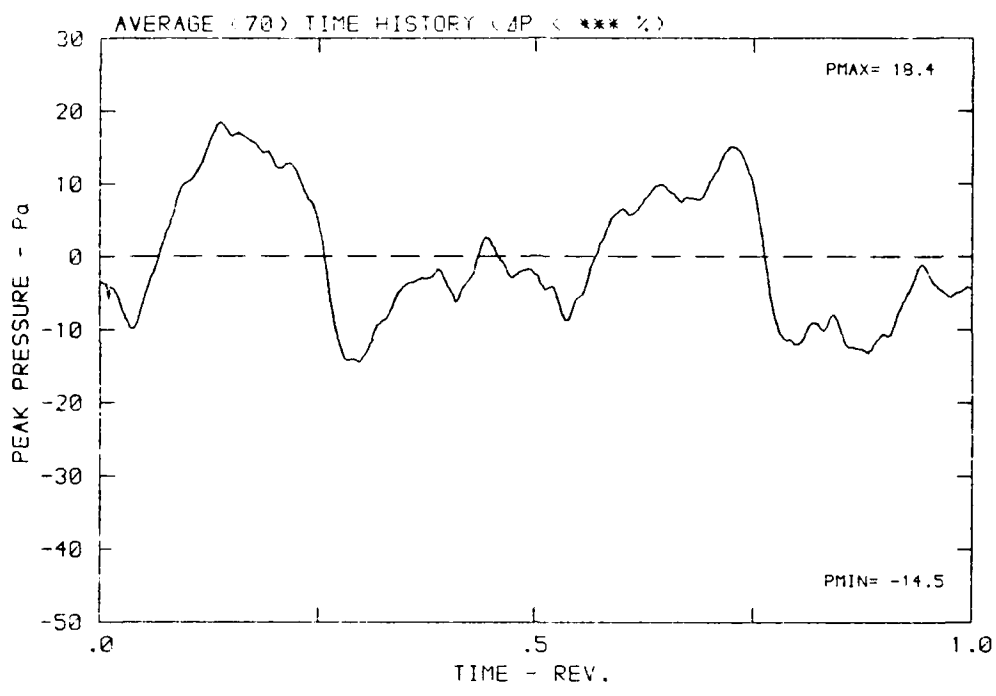
DATA POINT: GN-3 RUN: 153 MP: 7

β : 19.9° MH: .8735 n: 2700 rpm v/u: .268 ϕ : -7.4° T: 299.4 K



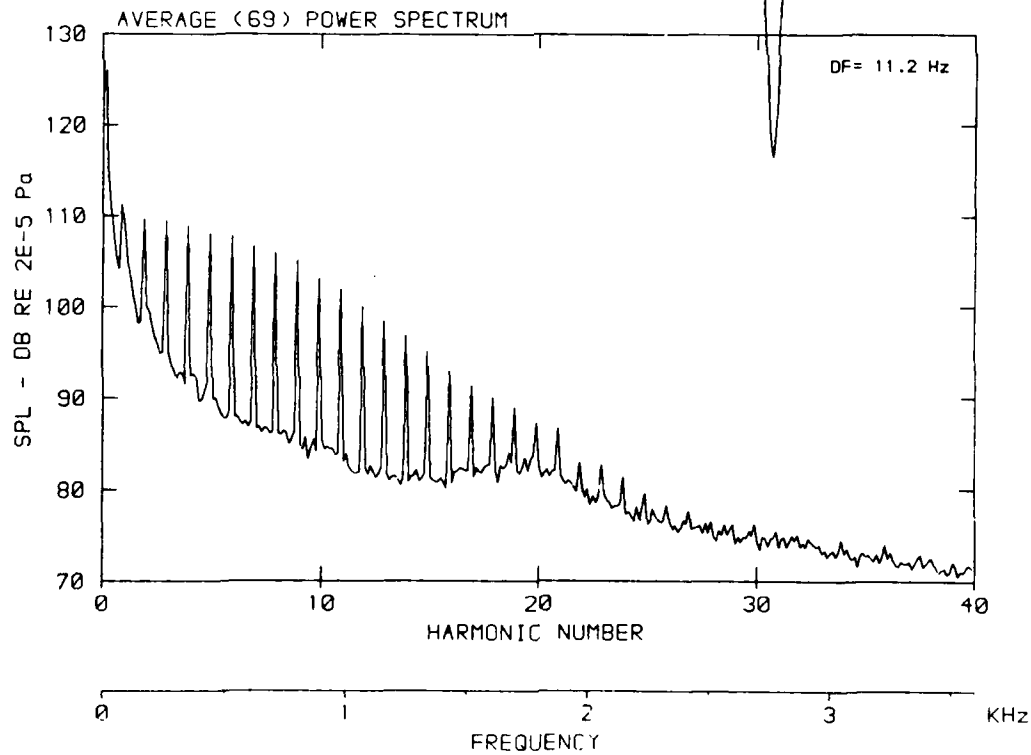
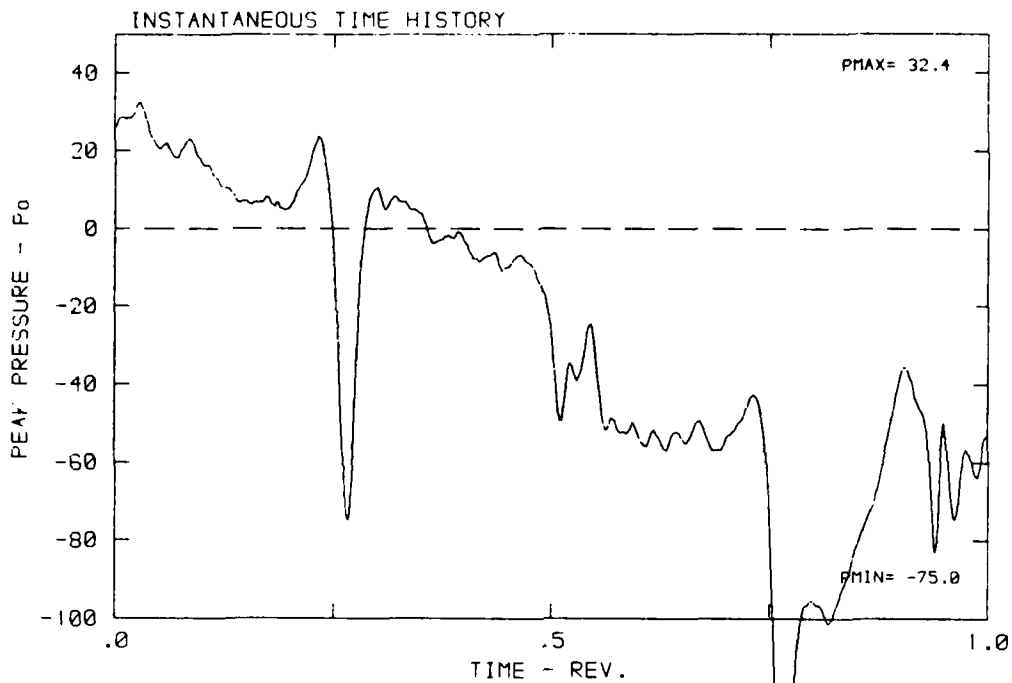
DATA POINT: GN-3 RUN: 153 MP: 7

β : 19.9° MH: .8735 n: 2700 rpm v_{ru} : .268 ϕ : -7.4° T: 288.4 K



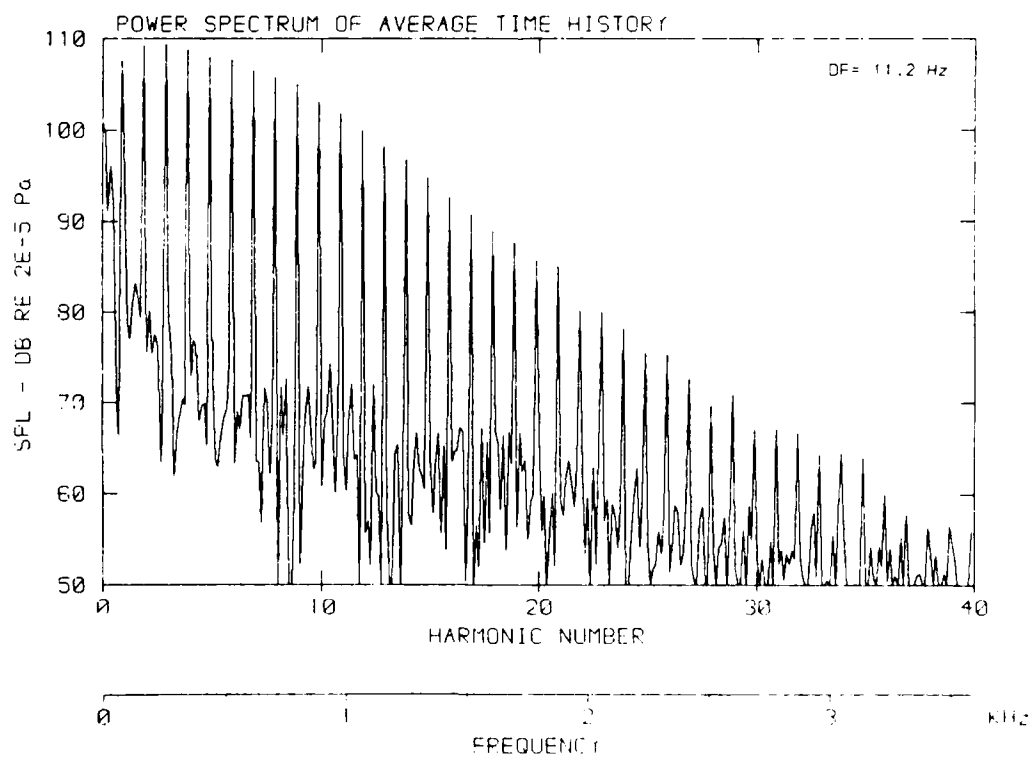
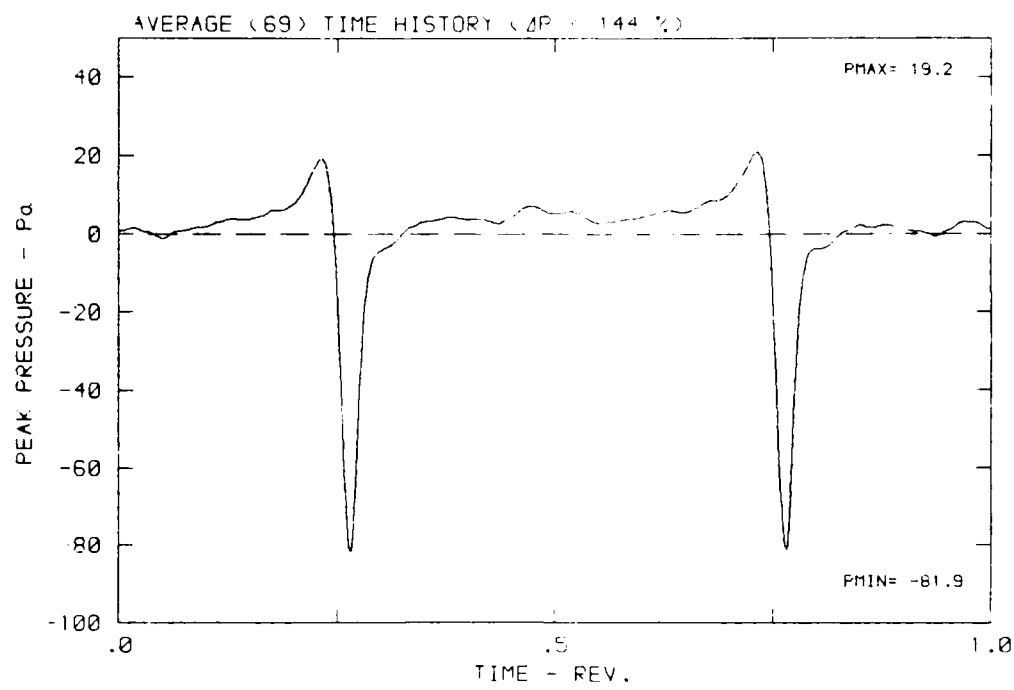
DATA POINT: GN-3 RUN: 153 MP: 8

β : 19.9° MH: .8735 n: 2700 rpm v/u : .268 ϕ : -7.4° T: 288.4 K



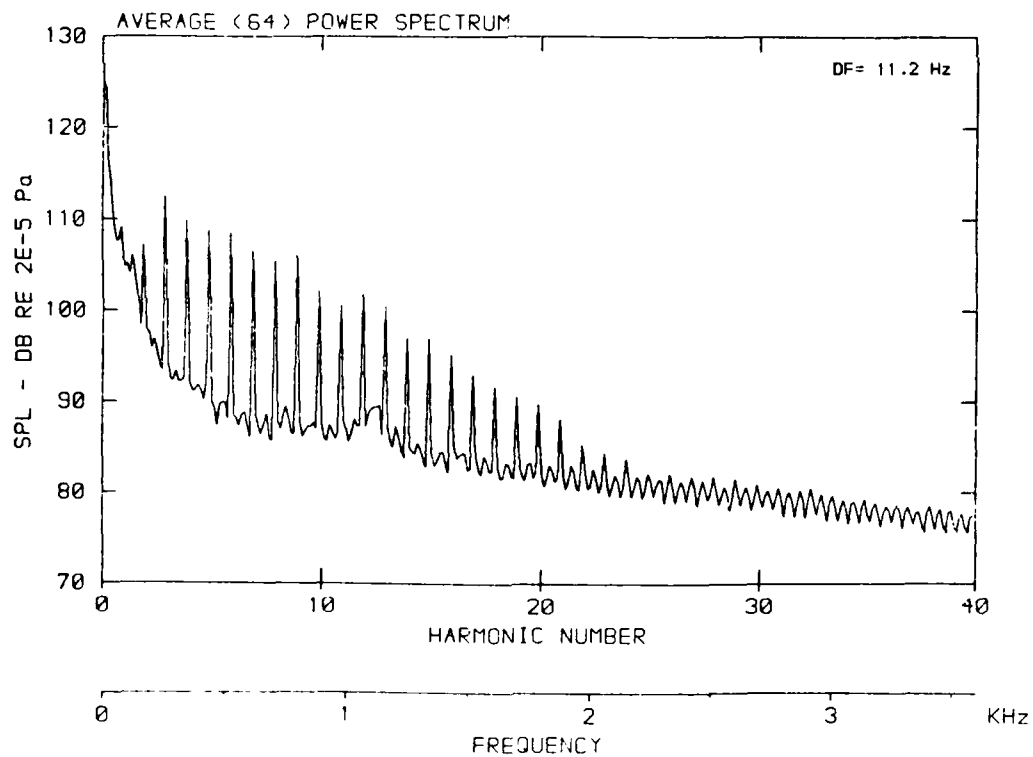
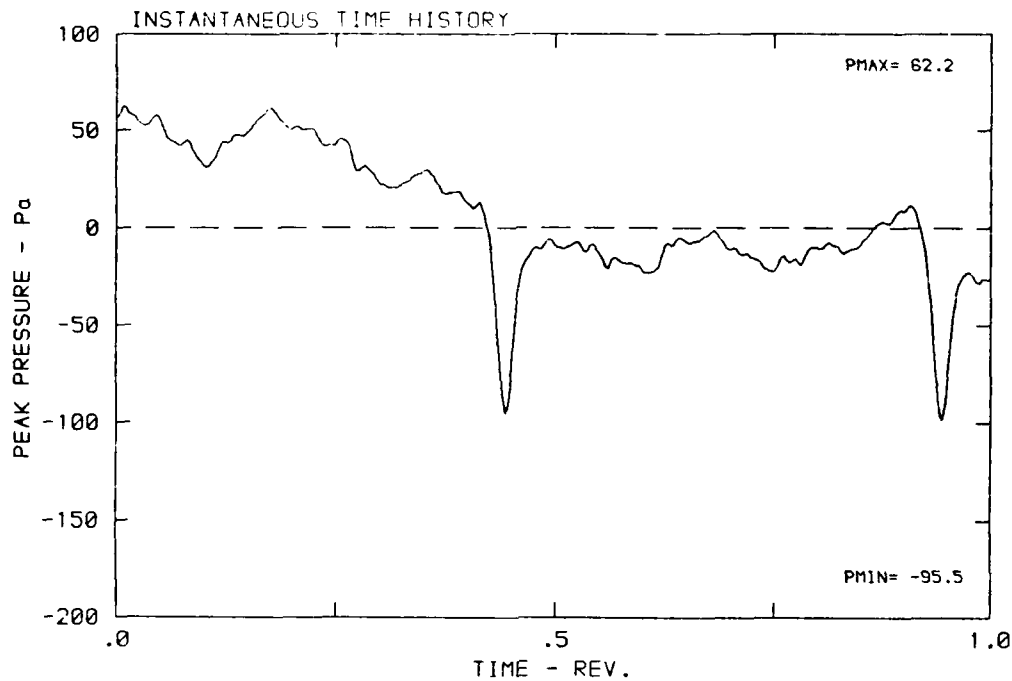
DATA POINT: GN-3 RUN: 153 MP: 8

β : 19.9° MH: .8735 n: 2700 rpm ν_{ru} : .268 ϕ : -7.4° T: 288.4 K



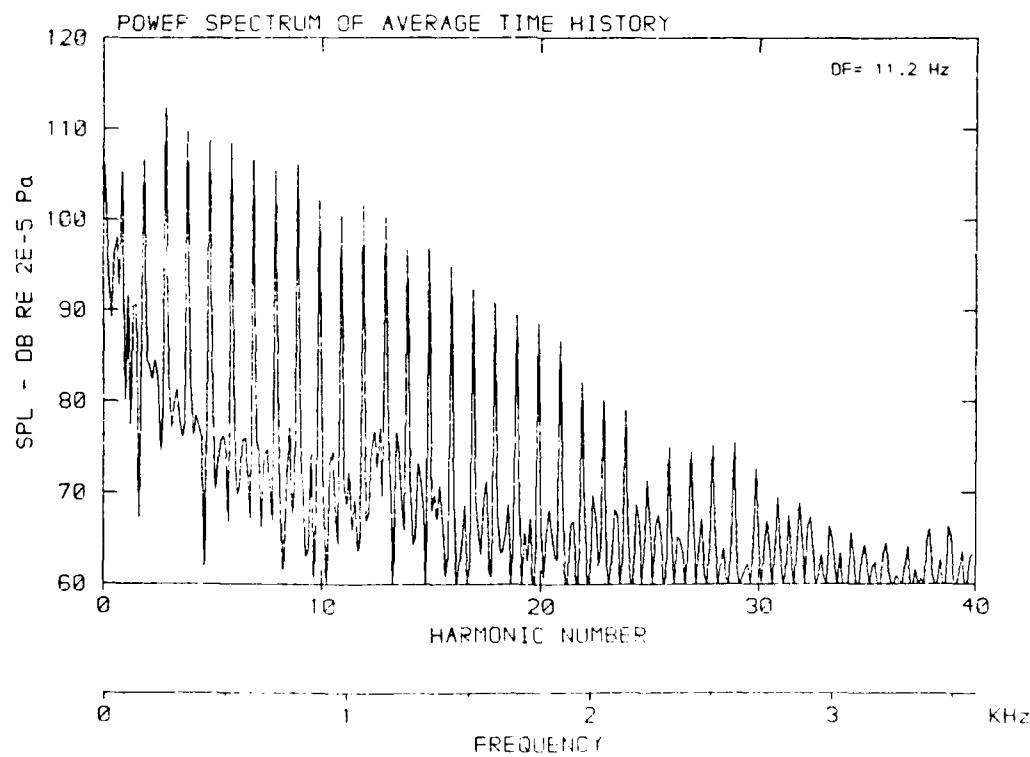
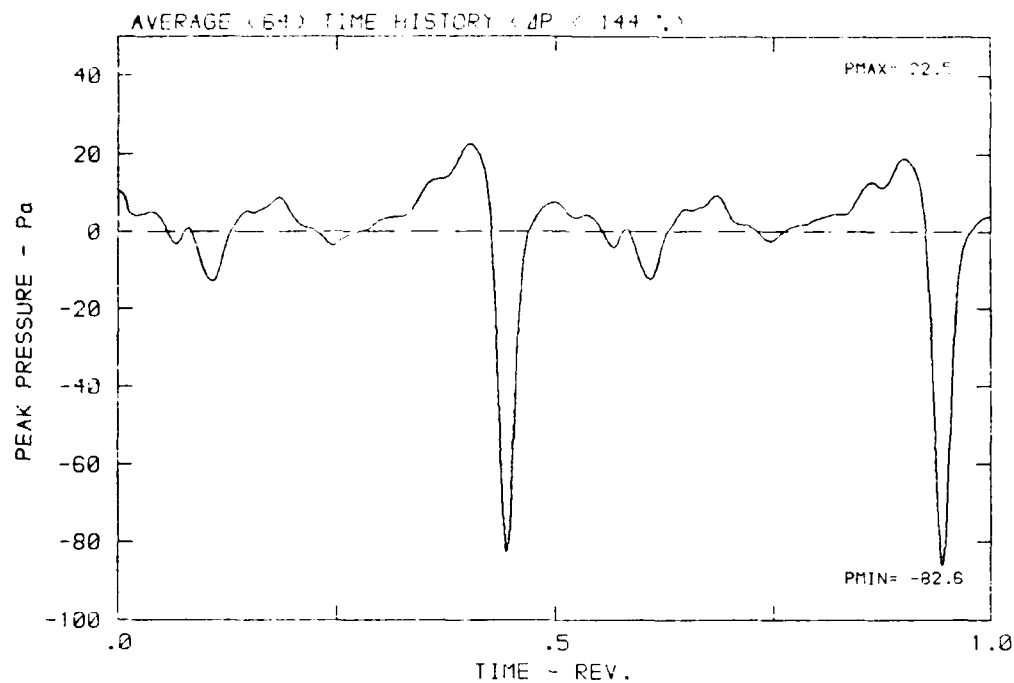
DATA POINT: GN-3 RUN: 153 MP: 9

β : 19.9° MH: .9735 n: 2700 rpm v/u : .268 ϕ : -7.4° T: 288.4 K



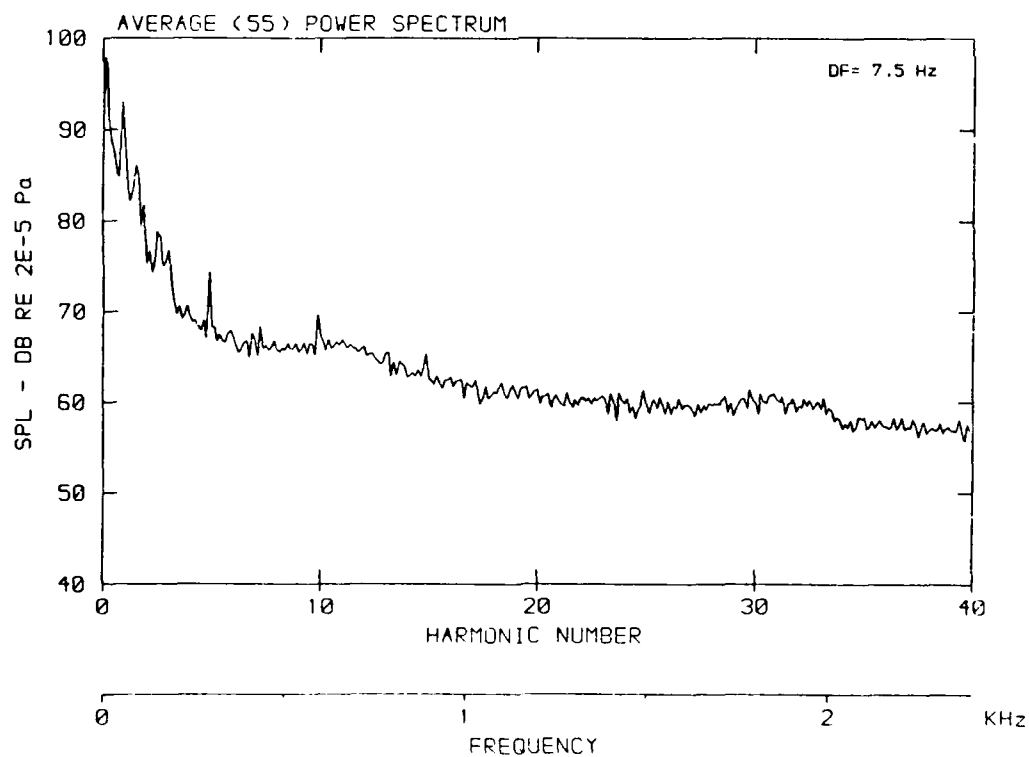
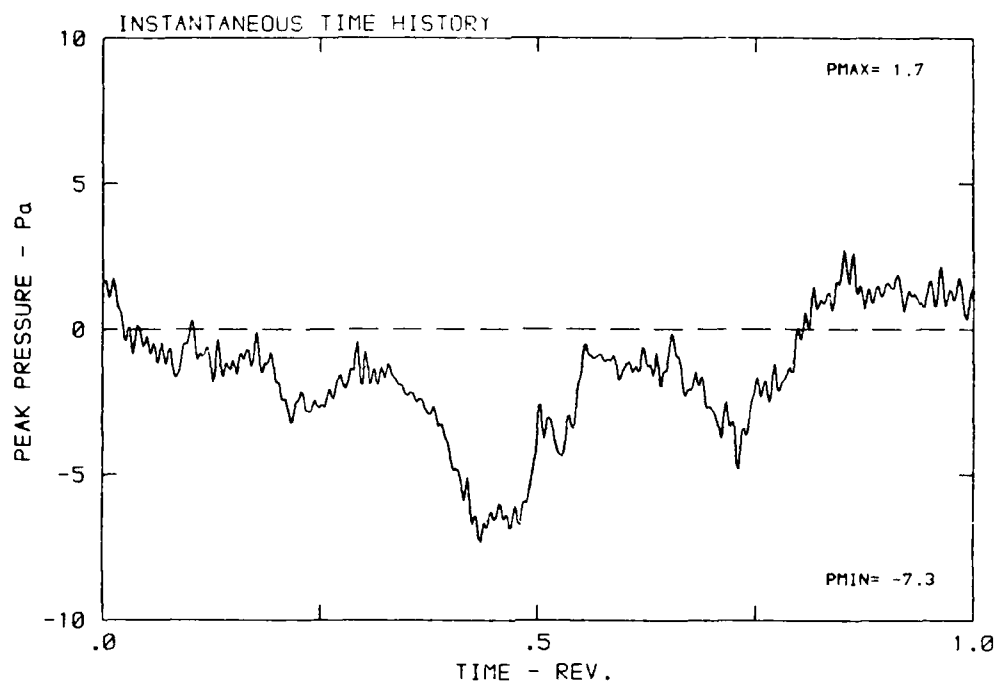
DATA POINT: 6N-3 RUN: 153 MP: 9

β : 19.9° MH: .8735 n: 2700 rpm ν_{cu} : .268 ϕ : -7.4° T: 298.4 K



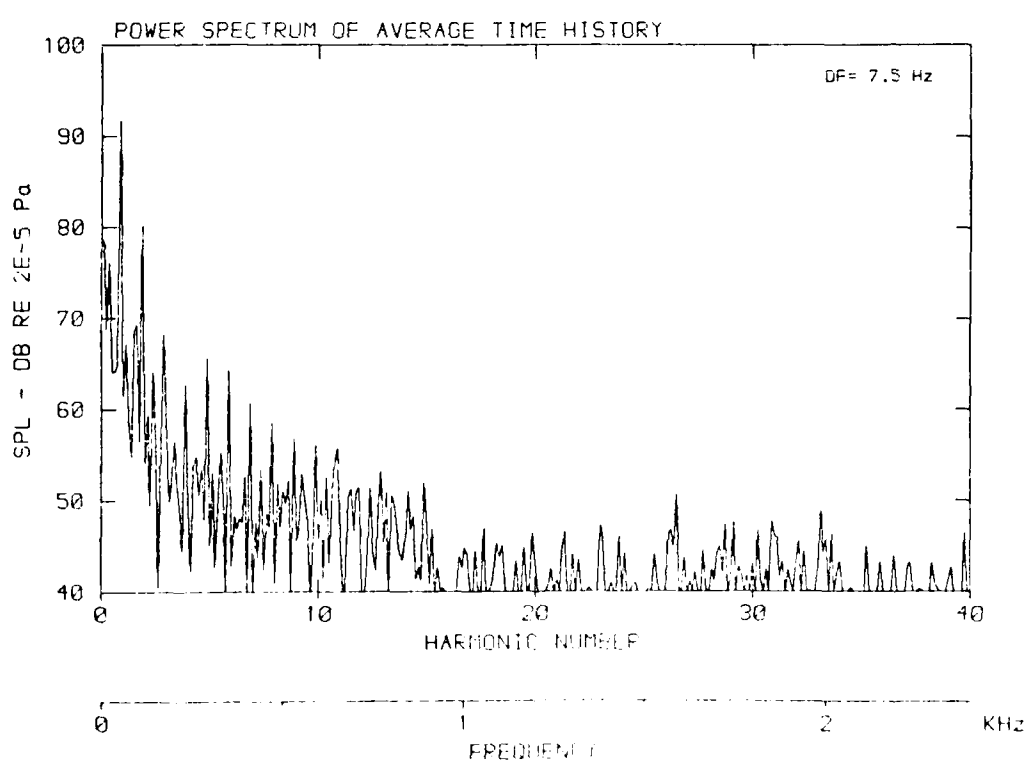
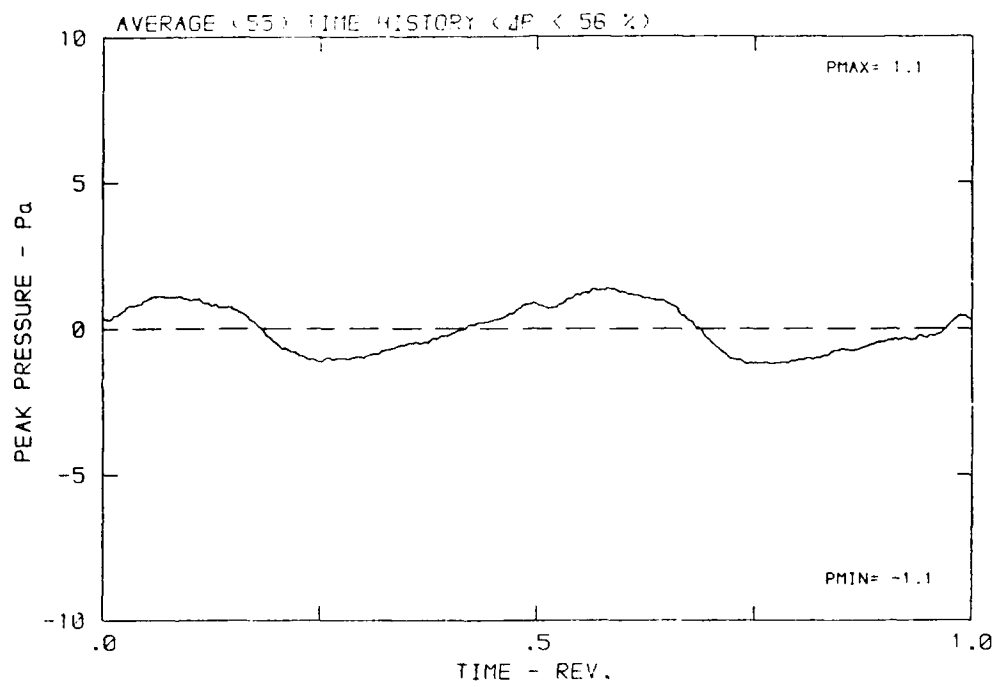
DATA POINT: GN-4 RUN: 148 MP: 1

β : 23.7° MH: .5829 n: 1800 rpm v/u: .257 ϕ : -7.4° T: 287.7 K



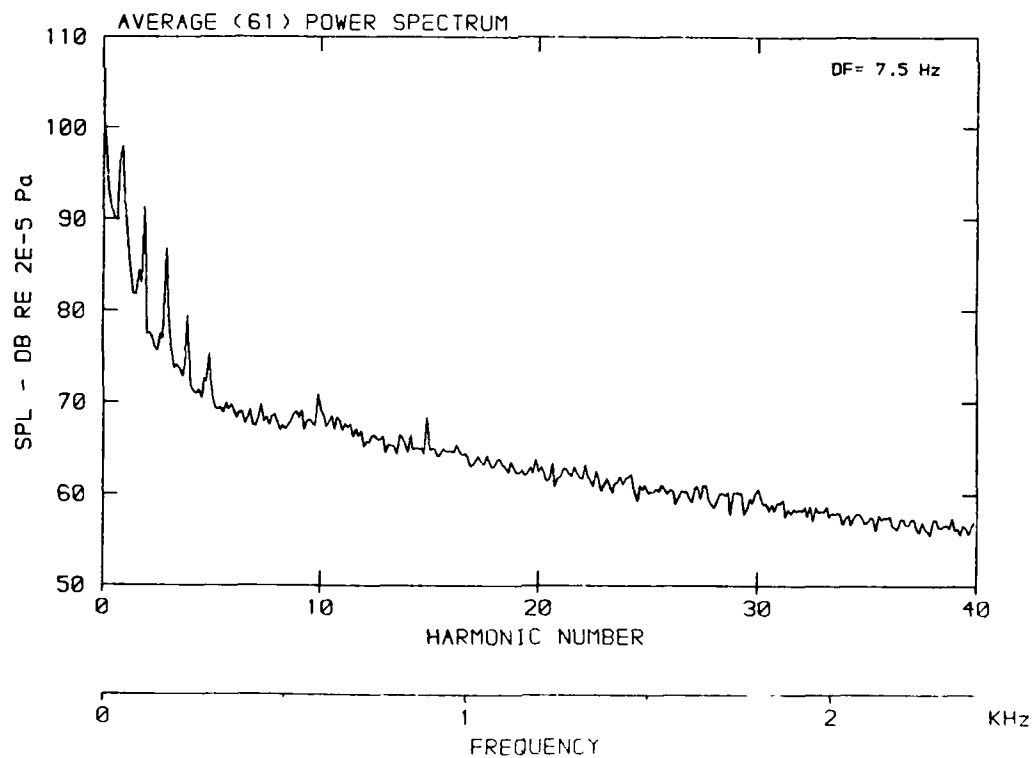
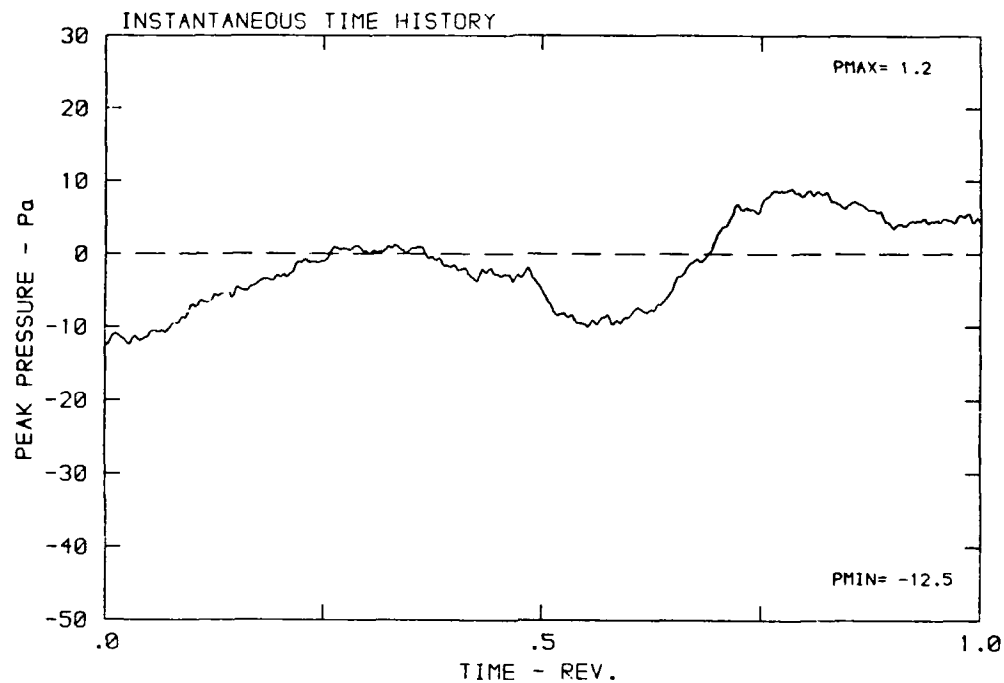
DATA POINT: 6N-4 RUN: 148 MP: 1

β : 23.7° MH: .5829 n: 1800 rpm v/u : .267 ϕ : -7.4° T: 287.7 K



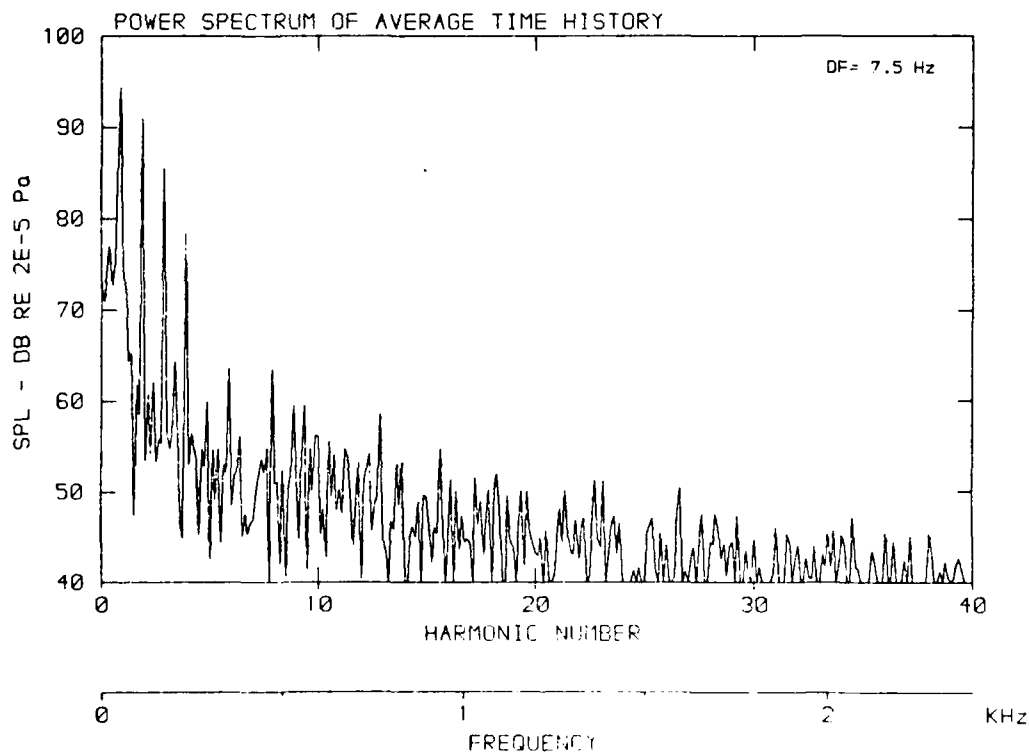
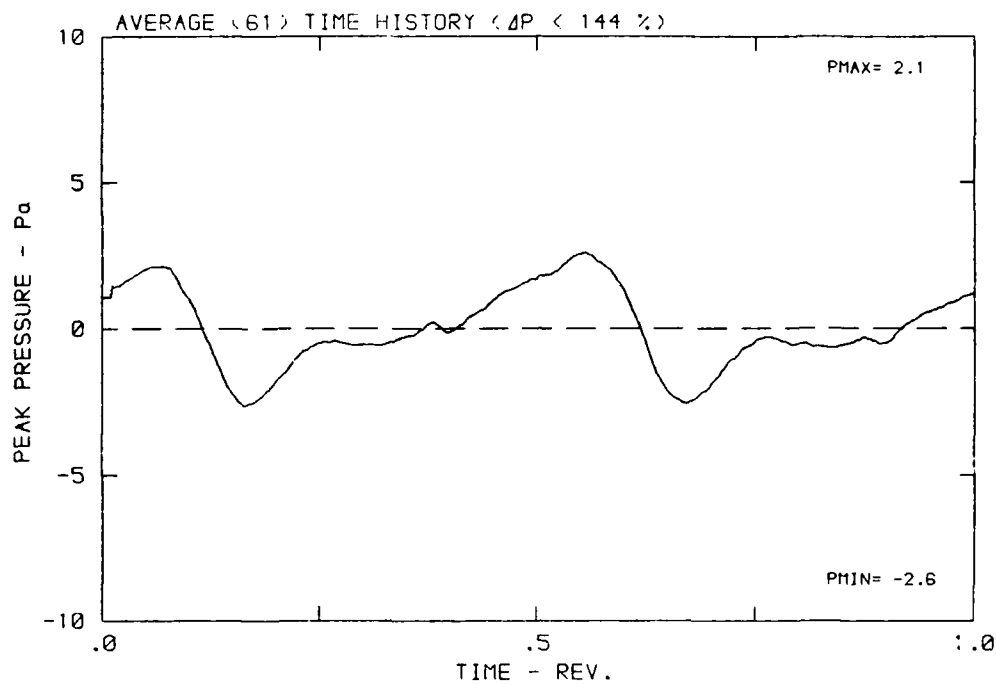
DATA POINT: GN-4 RUN: 148 MP: 2

β : 23.7° MH: .5829 n: 1800 rpm v/u: .267 ϕ : -7.4° T: 287.7 K



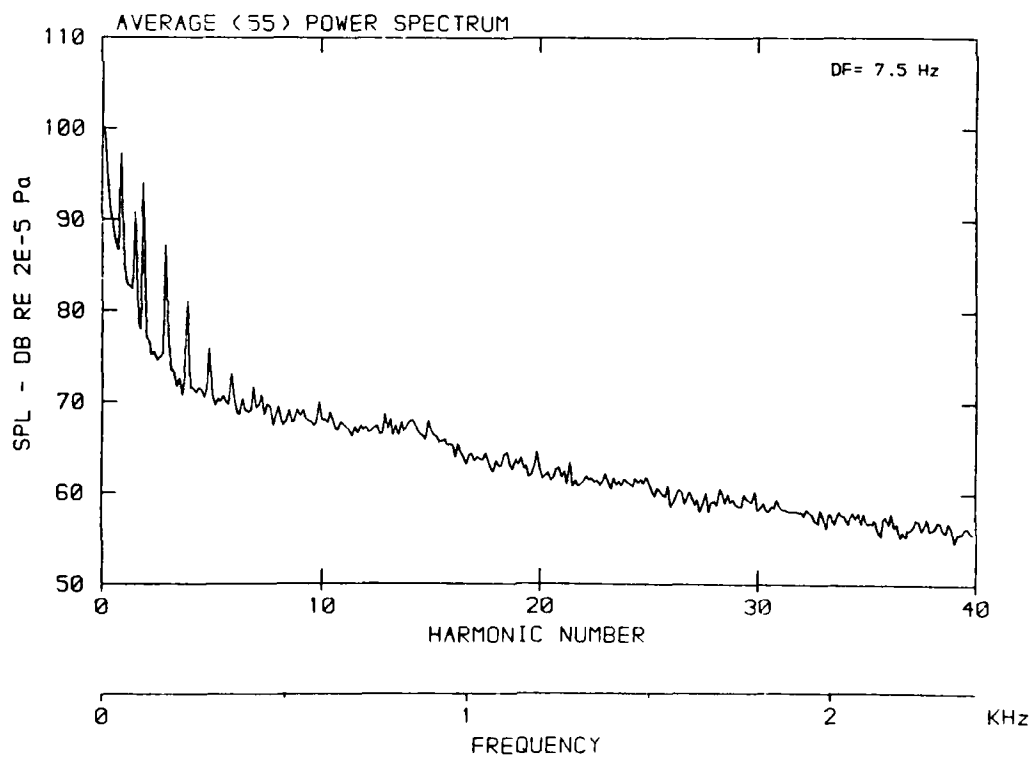
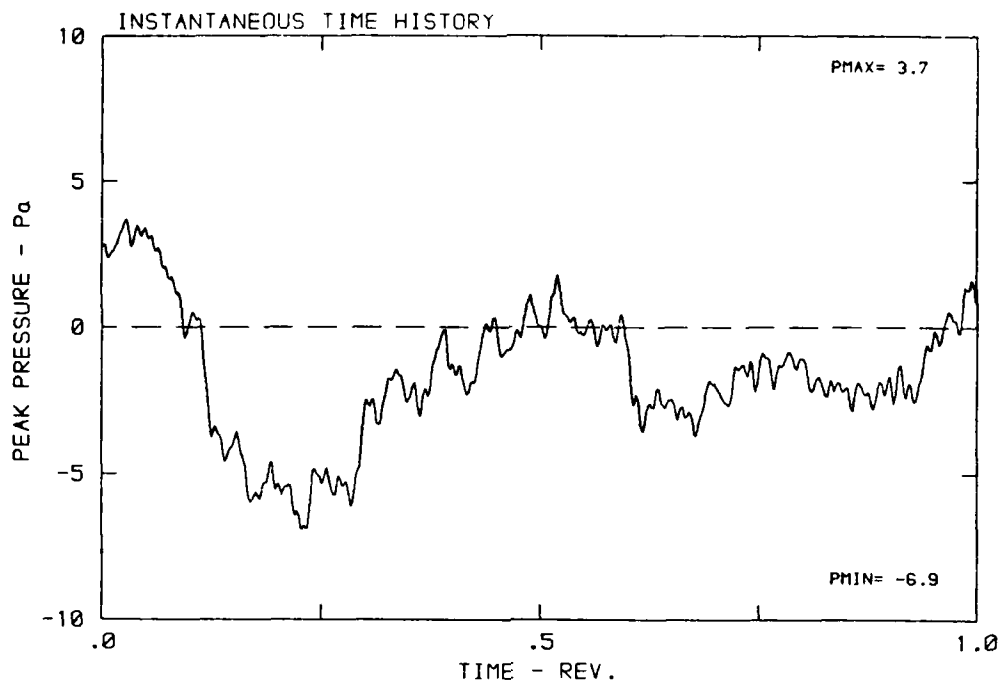
DATA POINT: GN-4 RUN: 148 MP: 2

β : 23.7° MH: .5829 n: 1800 rpm v/u: .267 ϕ : -7.4° T: 287.7 K



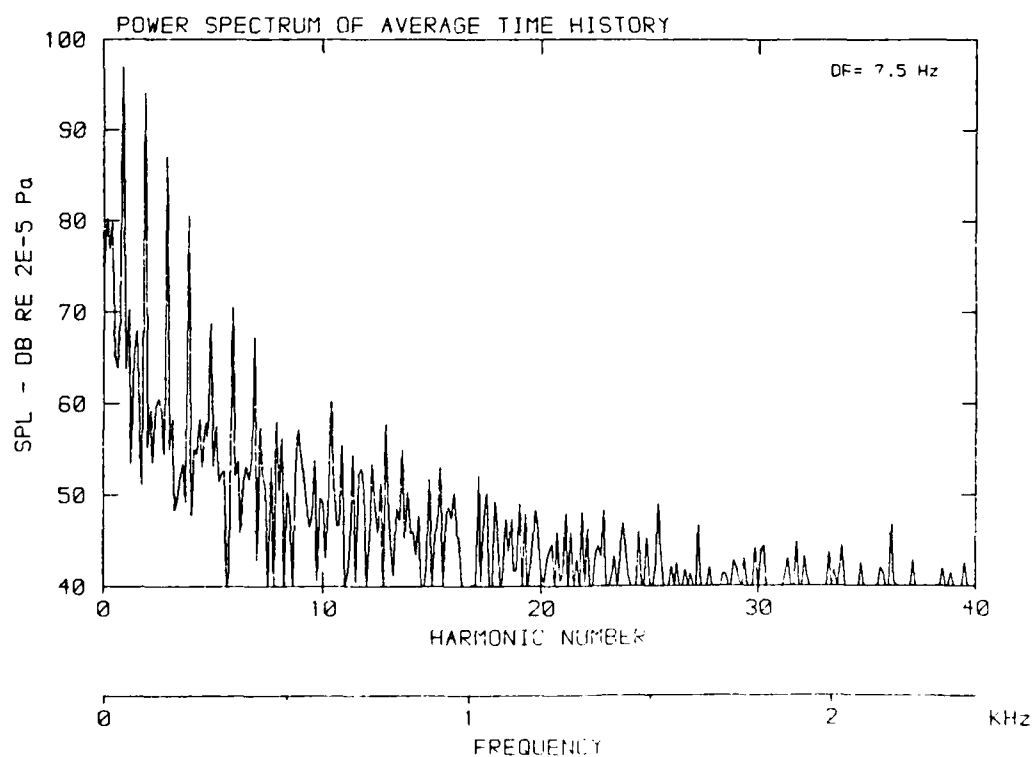
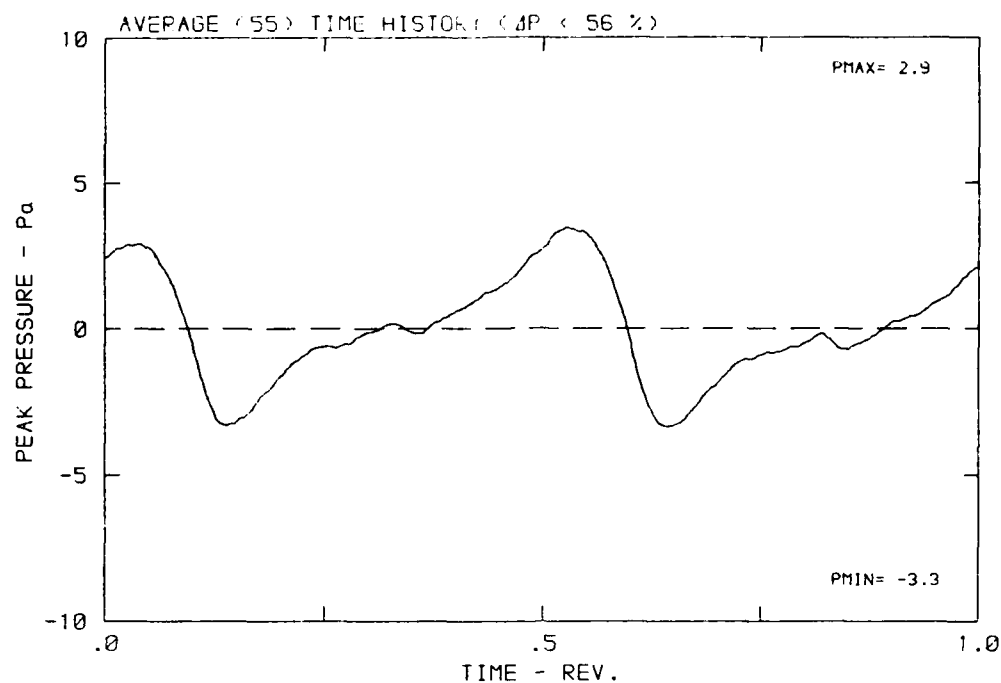
DATA POINT: GN-4 RUN: 146 MP: 3

β : 23.7° MH: .5829 n: 1800 rpm v/u: .267 ϕ : -7.4° T: 287.7 K



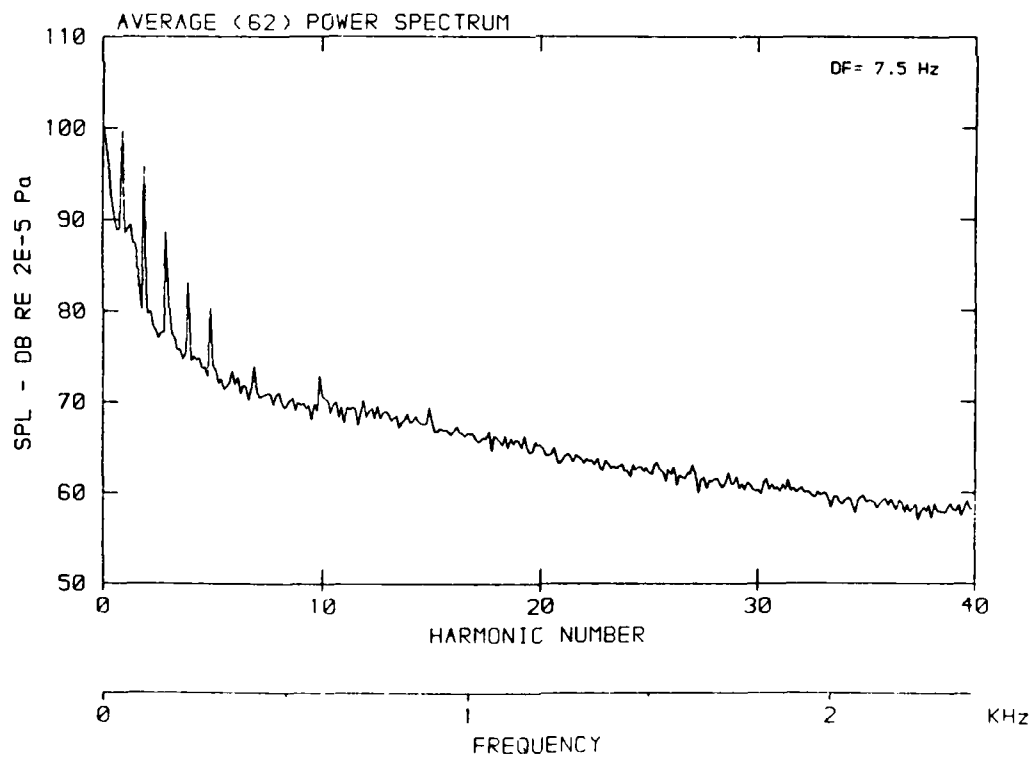
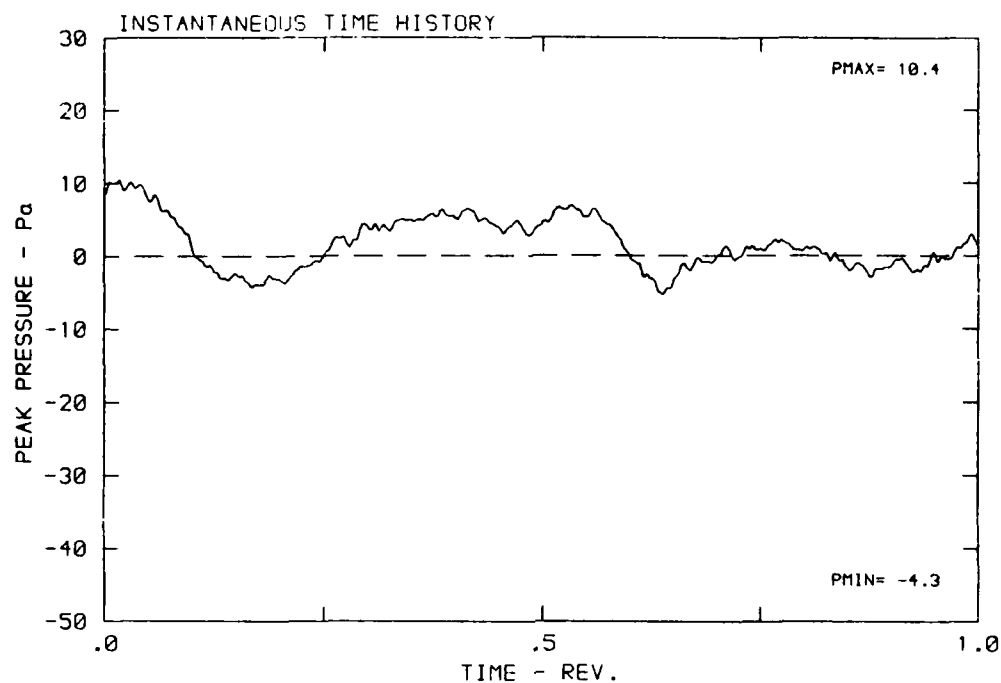
DATA POINT: GN-4 RUN: 148 MP: 3

β : 23.7° MH: .5829 n: 1800 rpm v/u : .267 ϕ : -7.4° T: 287.7 K



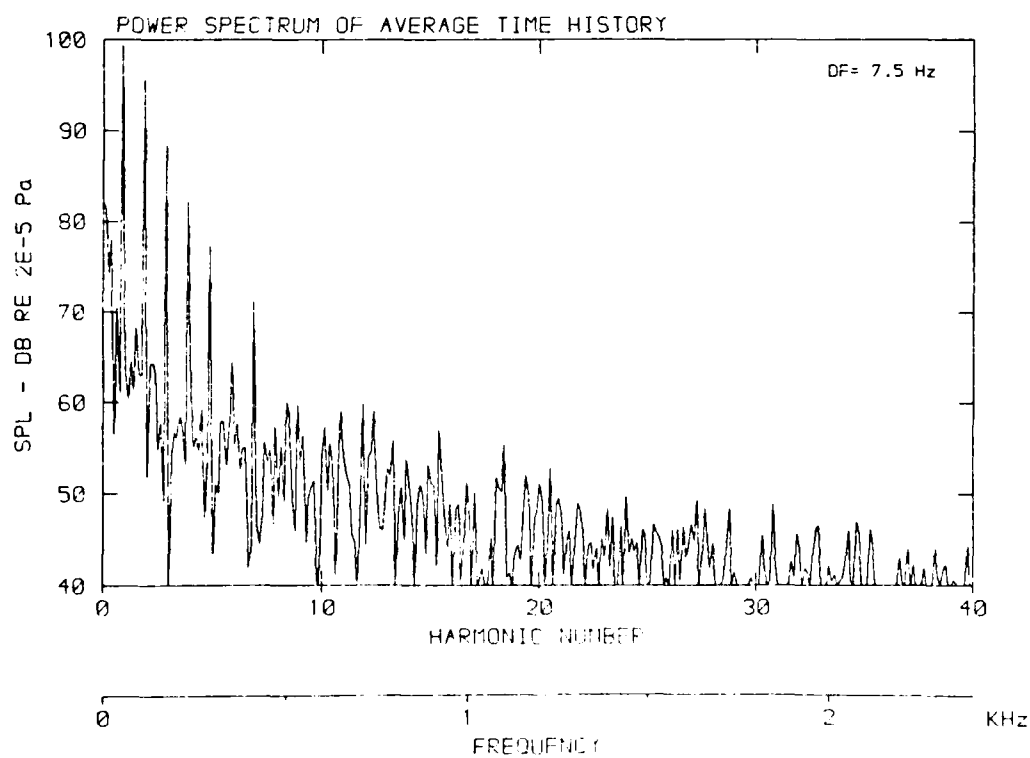
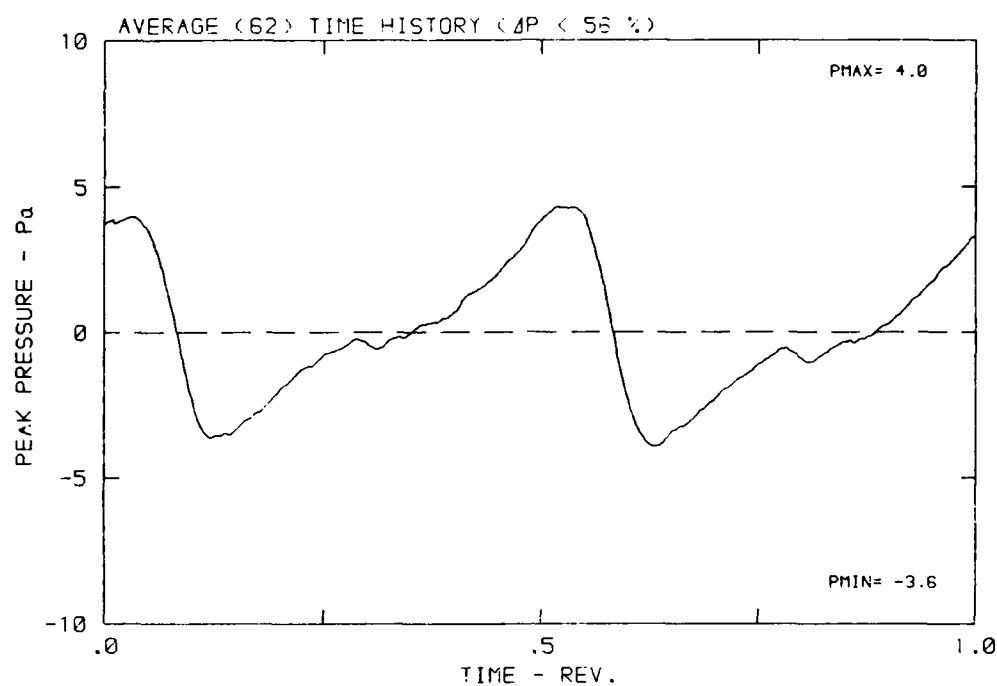
DATA POINT: GN-4 RUN: 148 MP: 4

β : 23.7° MH: .5829 n: 1800 rpm v/u: .267 ϕ : -7.4° T: 287.7 K



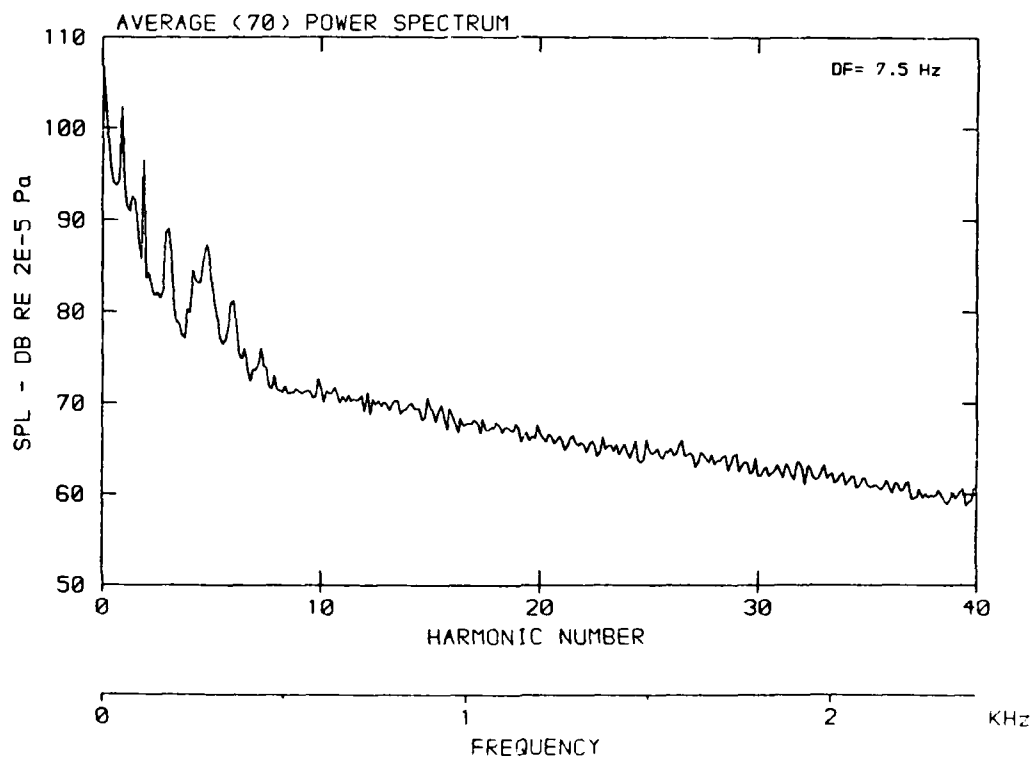
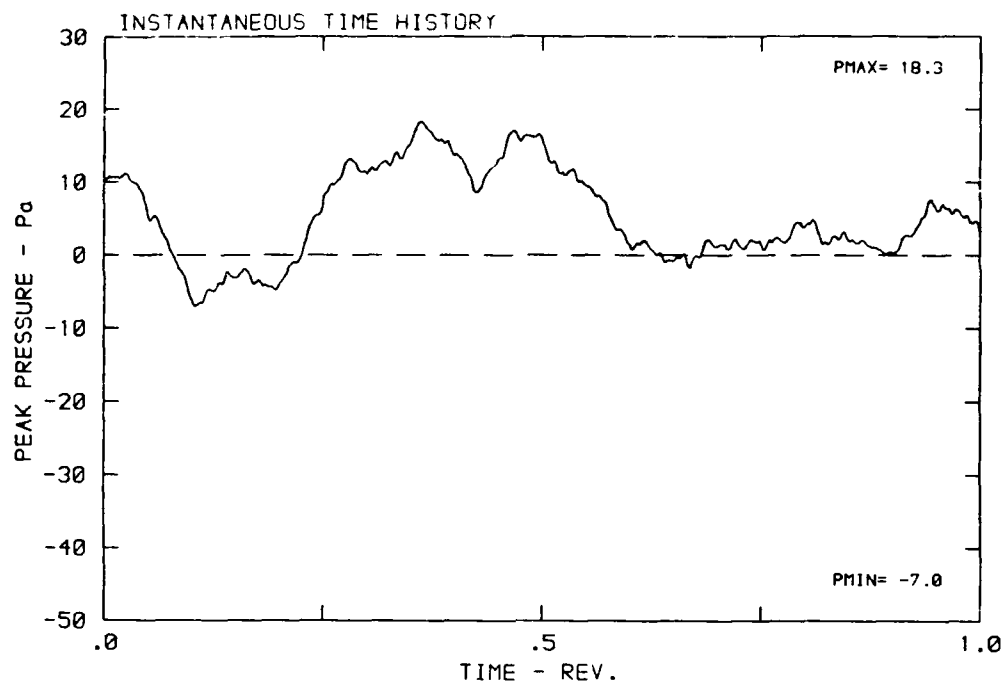
DATA POINT: GN-4 RUN: 148 MP: 4

β : 23.7° MH: .5829 n: 1800 rpm v/u : .267 ψ : -7.4° T: 287.7 K



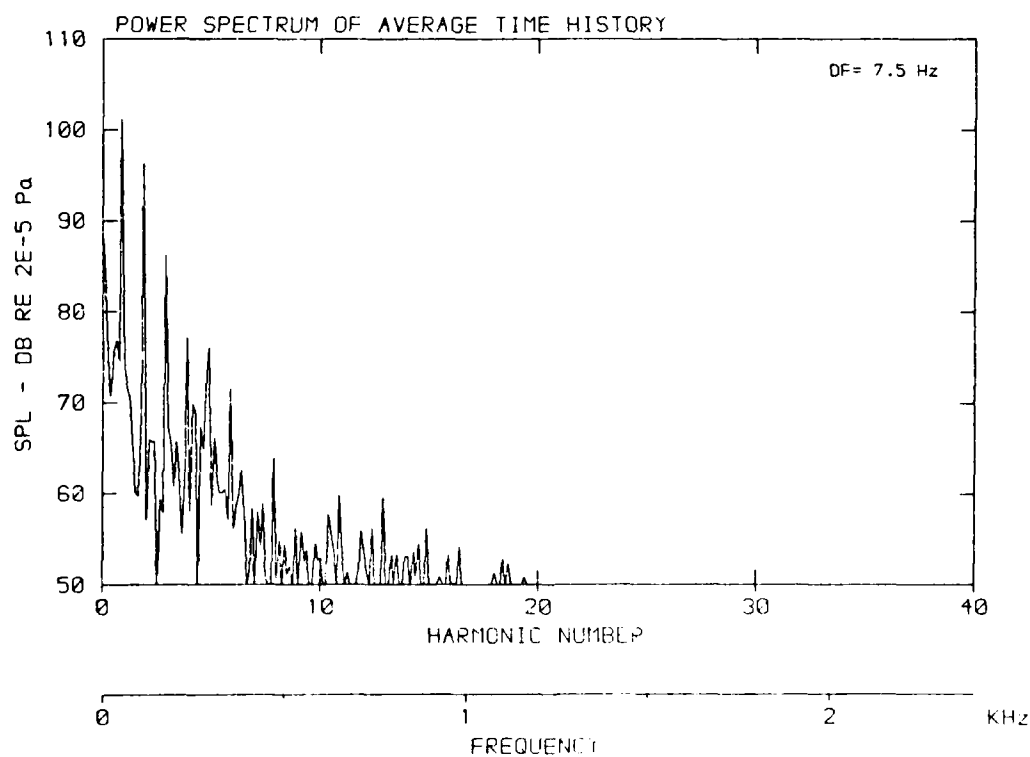
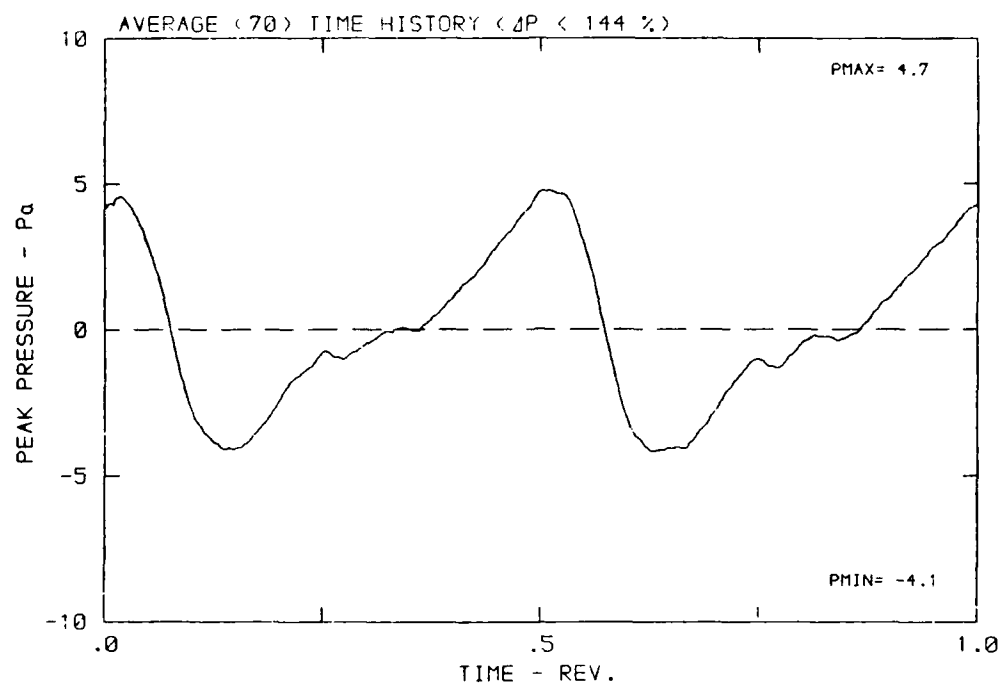
DATA POINT: GN-4 RUN: 148 MP: 5

β : 23.7° MH: .5829 n: 1800 rpm v/u : .267 ϕ : -7.4° T: 287.7 K



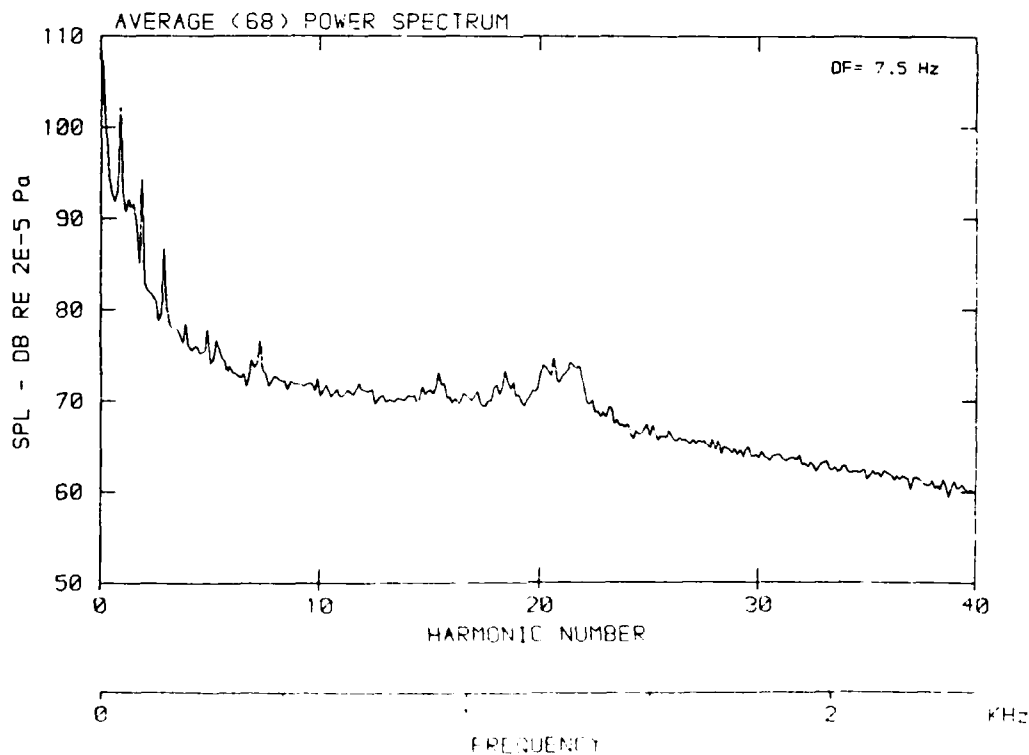
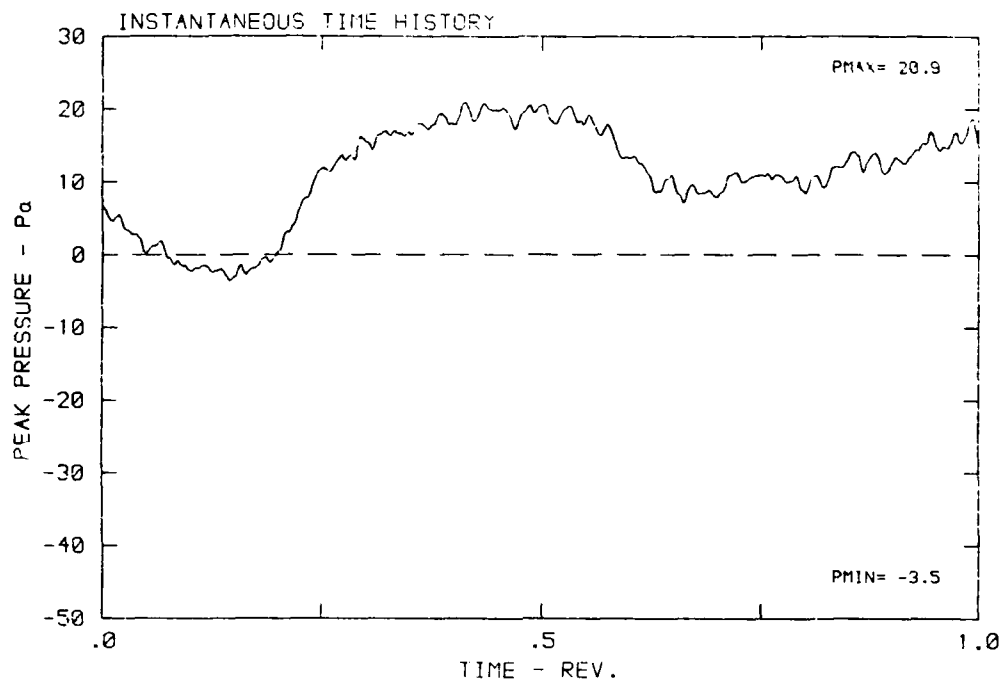
DATA POINT: GN-4 RUN: 148 MP: 5

β : 23.7° MH: .5829 n: 1800 rpm v/u: .267 ϕ : -7.4° T: 287.7 K



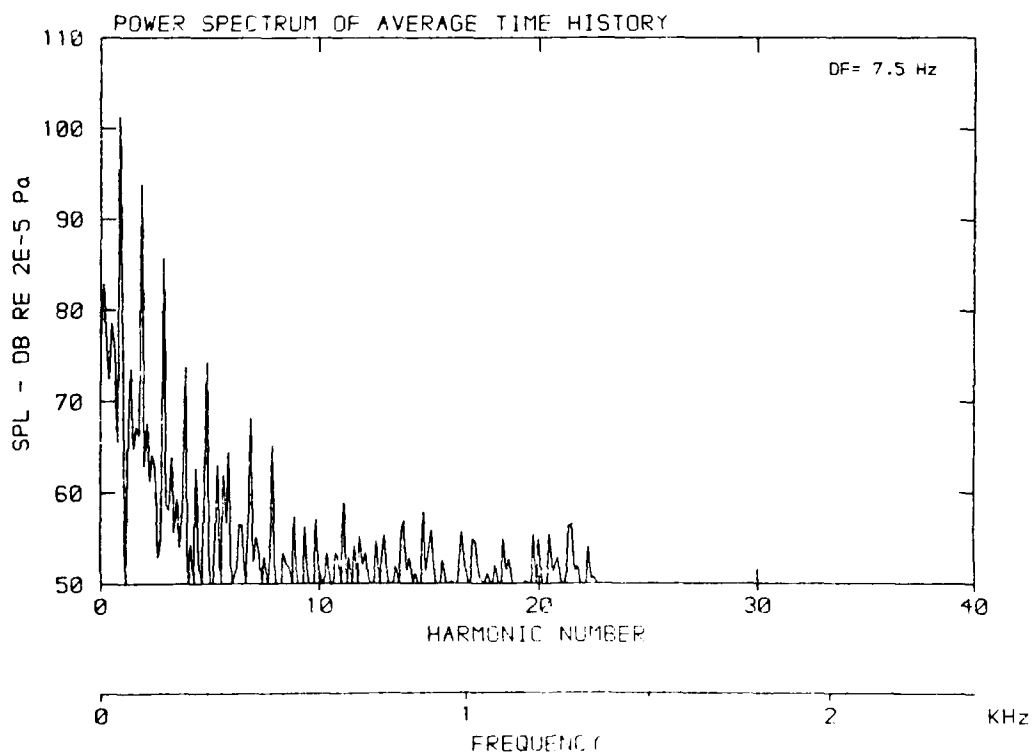
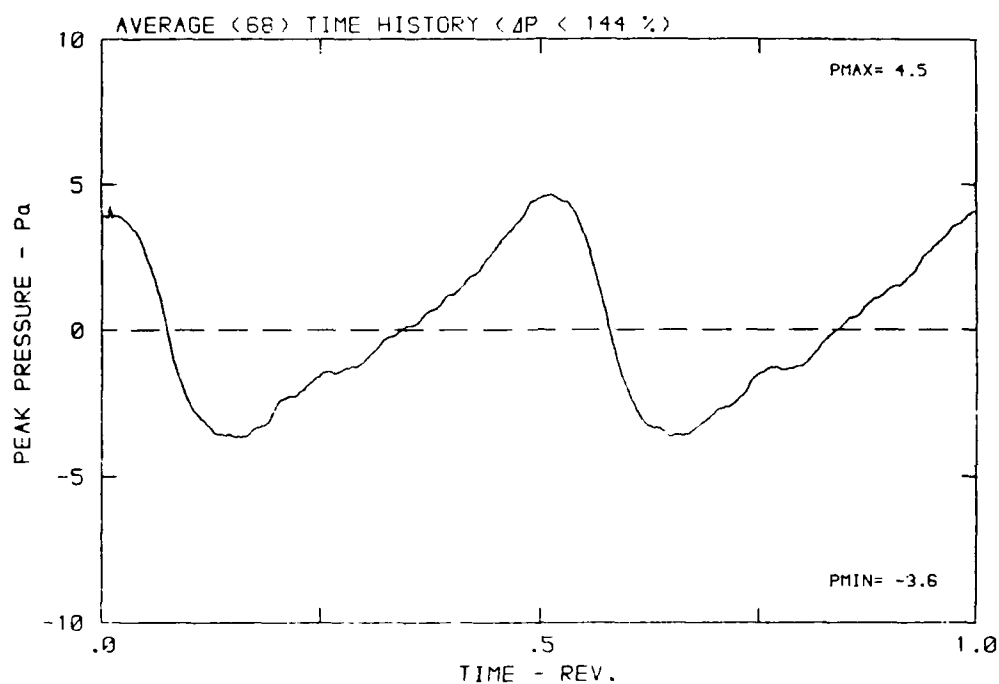
DATA POINT: GN-4 RUN: 148 MP: E

β : 23.7° MH: .5829 n: 1800 rpm vru: .207 p: -7.4° T: 237.7



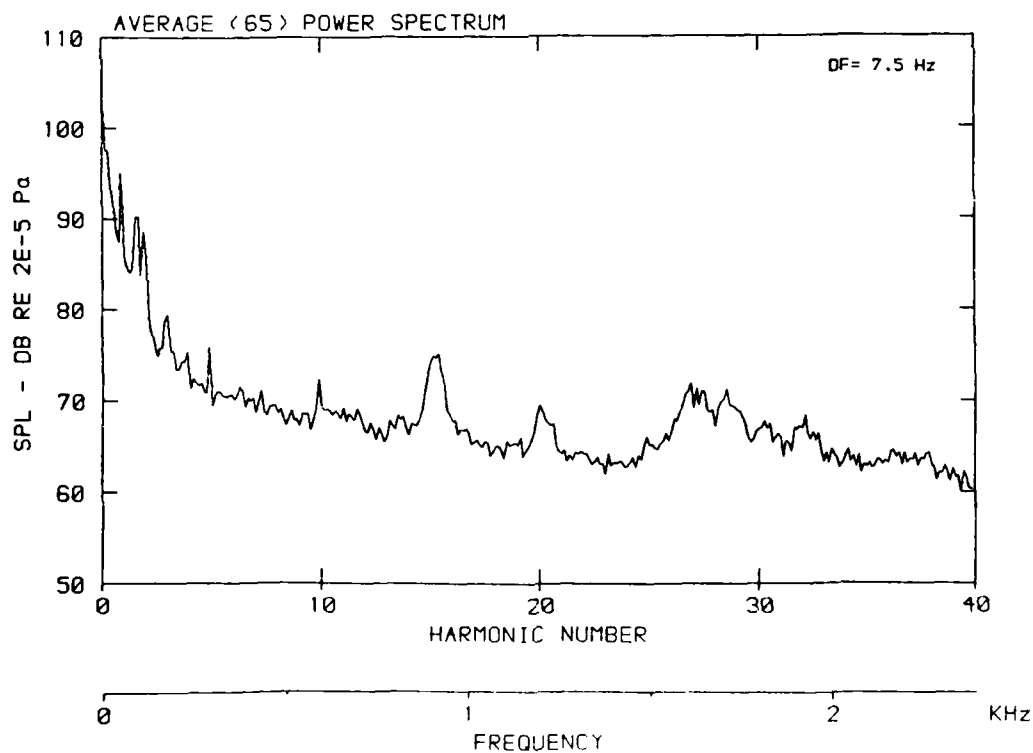
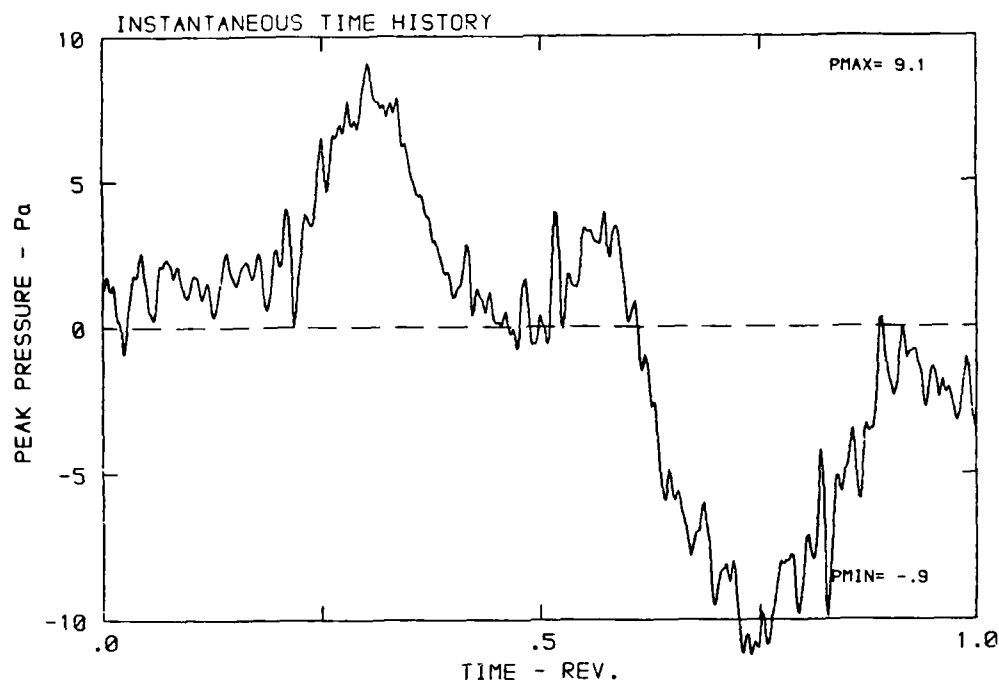
DATA POINT: GN-4 RUN: 148 MP: 6

β : 23.7° MH: .5829 n: 1800 rpm v/u: .267 ϕ : -7.4° T: 287.7 K



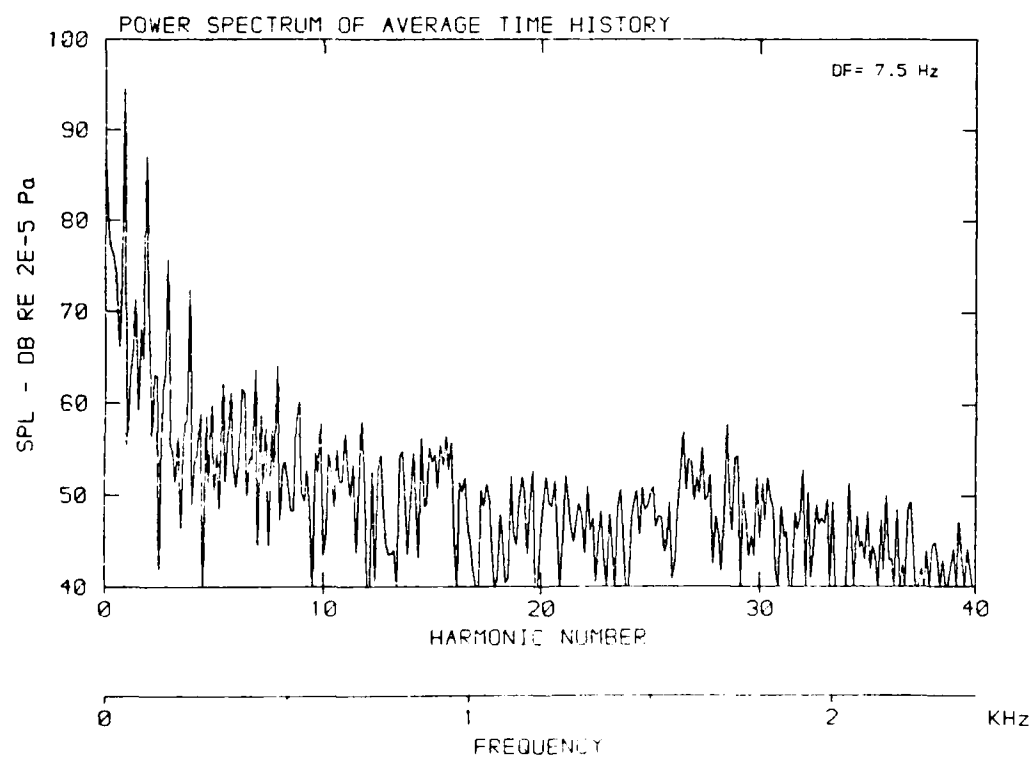
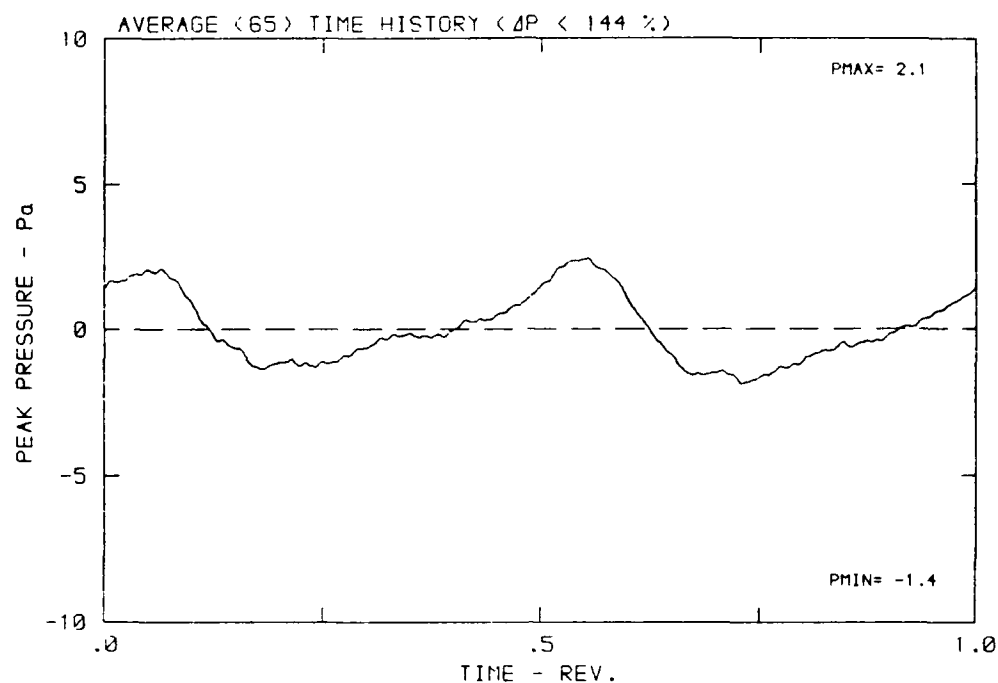
DATA POINT: GN-4 RUN: 148 MP: 7

β : 23.7° MH: .5829 n: 1800 rpm v/u: .267 ϕ : -7.4° T: 287.7 K



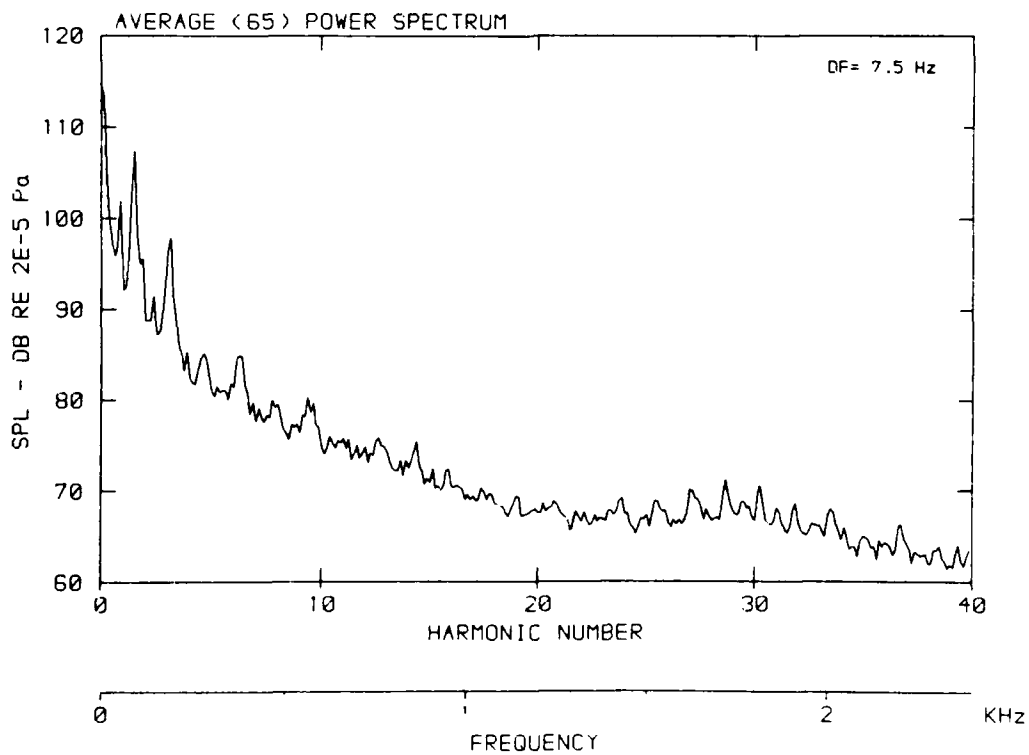
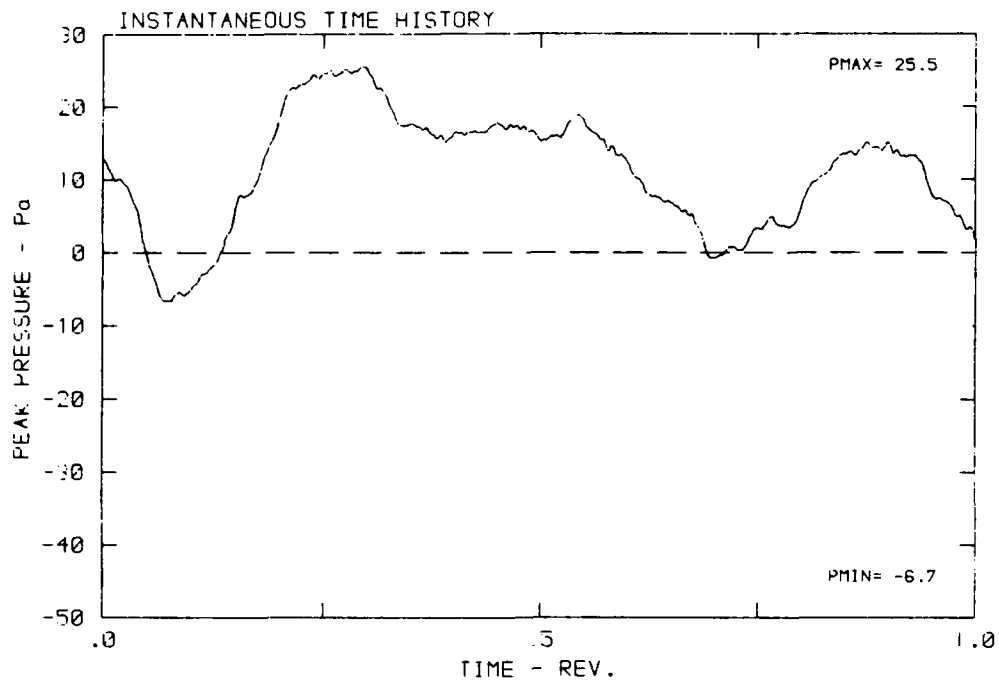
DATA PCINT: GN-4 RUN: 148 MP: 7

β : 23.7° MH: .5829 n: 1800 rpm v/u : .267 ϕ : -7.4° T: 287.7 K



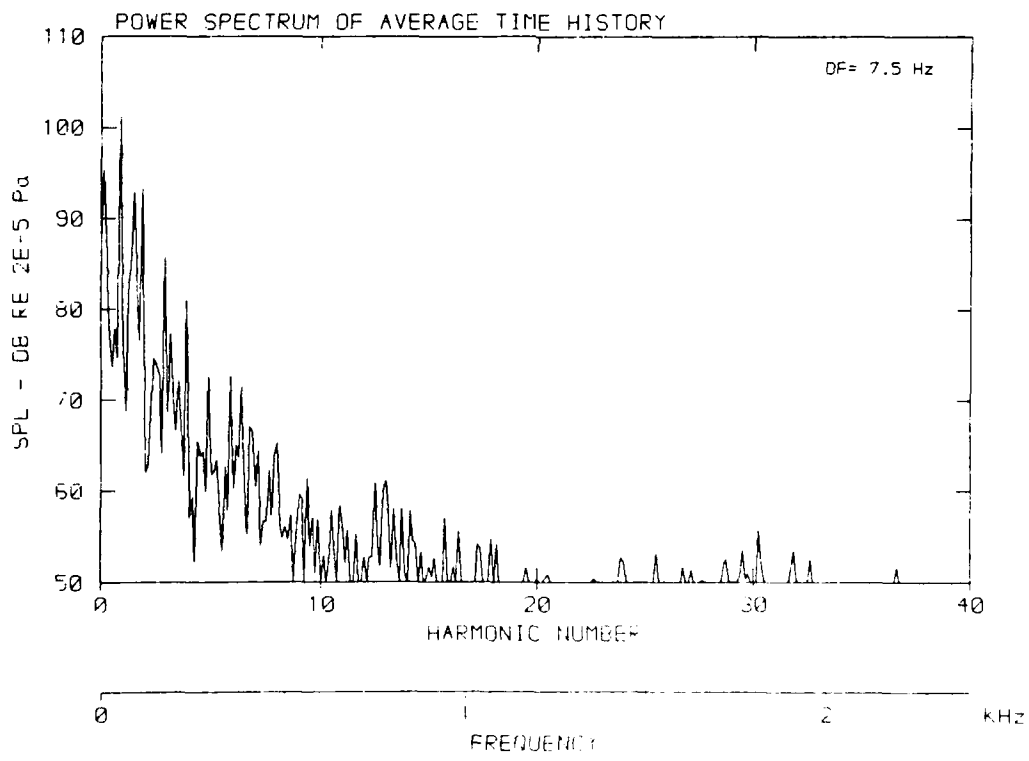
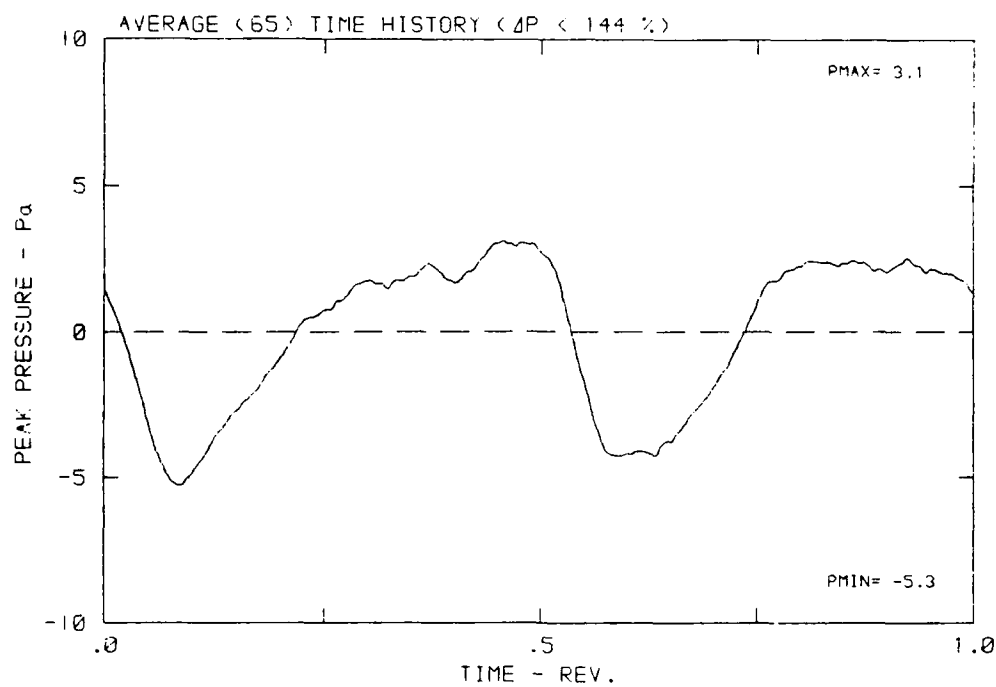
DATA POINT: GN-4 RUN: 148 MP: 8

β : 23.7° MH: .5829 n: 1800 rpm v/u : .267 ϕ : -7.4° T: 287.7 K



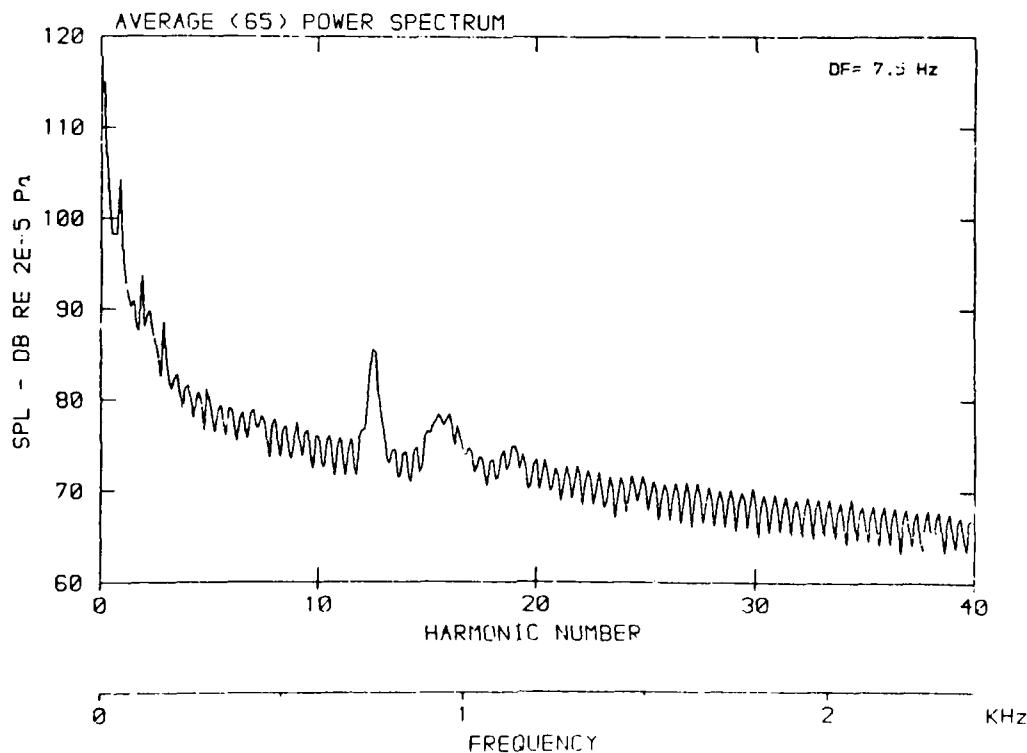
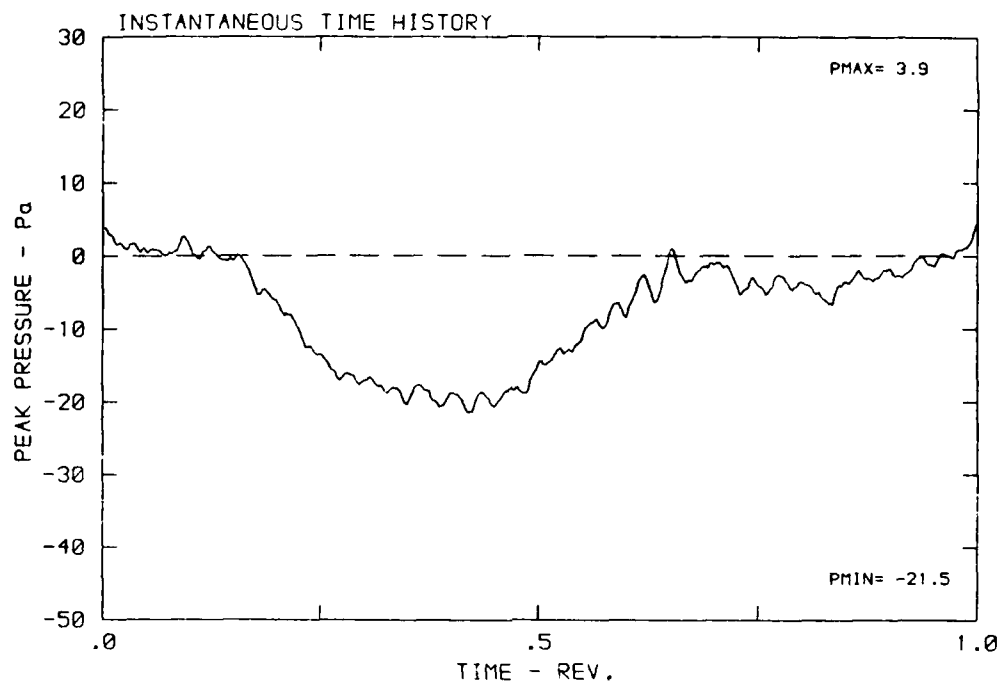
DATA POINT: GN-4 RUN: 148 MP: 8

β : 23.7° MH: .5829 n: 1800 rpm v/u : .267 ϕ : -7.4° T: 287.7 K



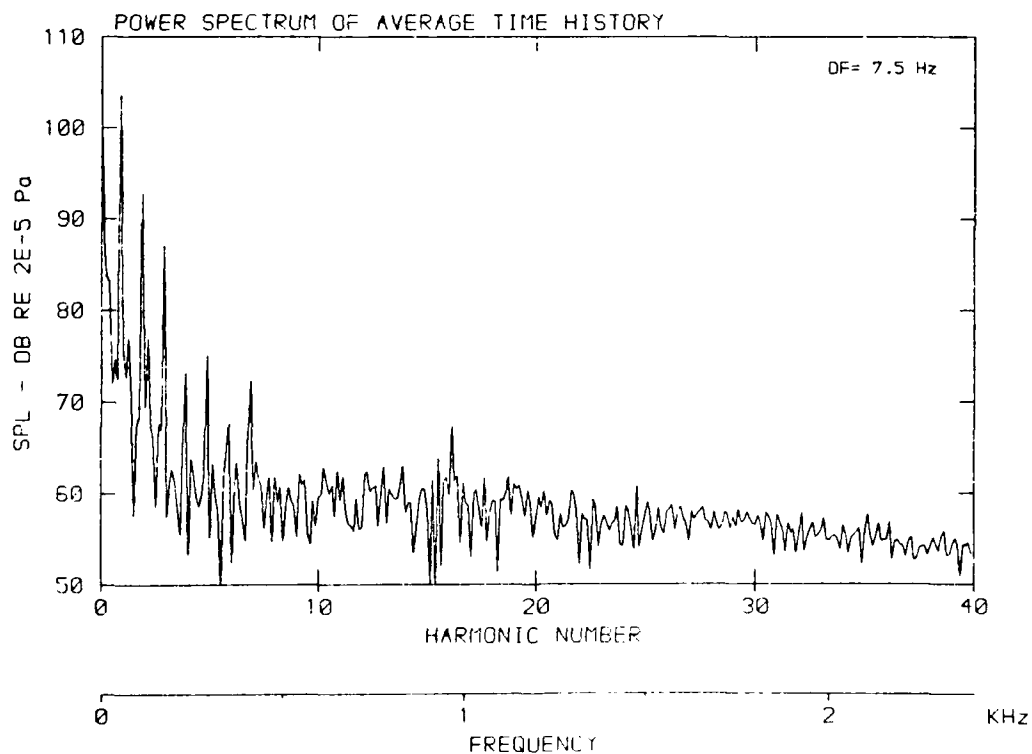
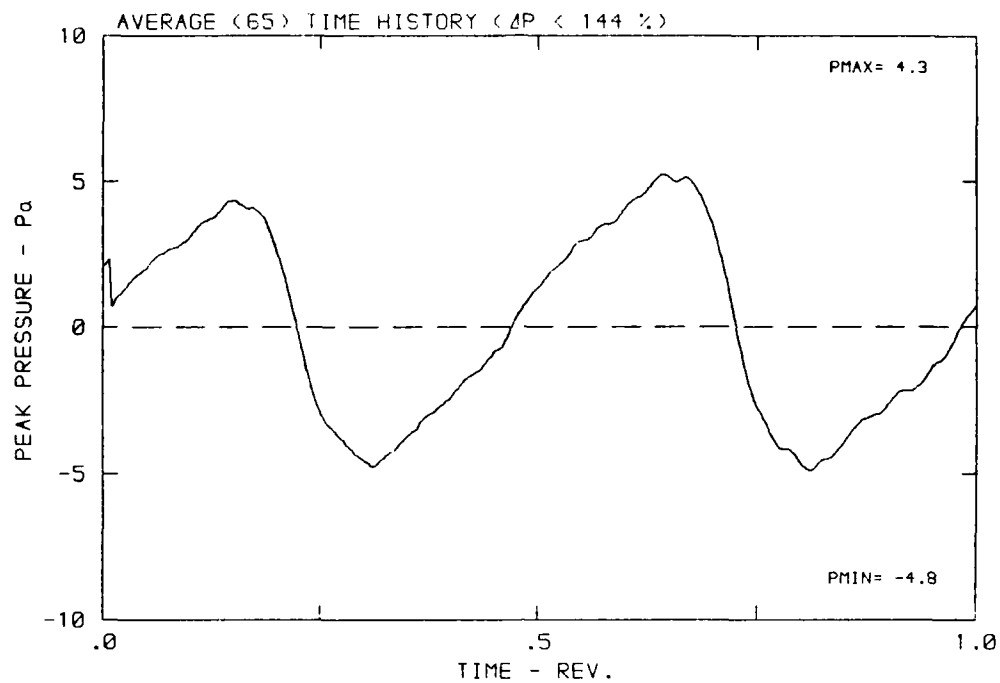
DATA POINT: GN-4 RUN: 148 MF: 9

β : 23.7° MH: .5829 n: 1800 rpm v/u: .267 ϕ : -7.4° T: 287.7 K



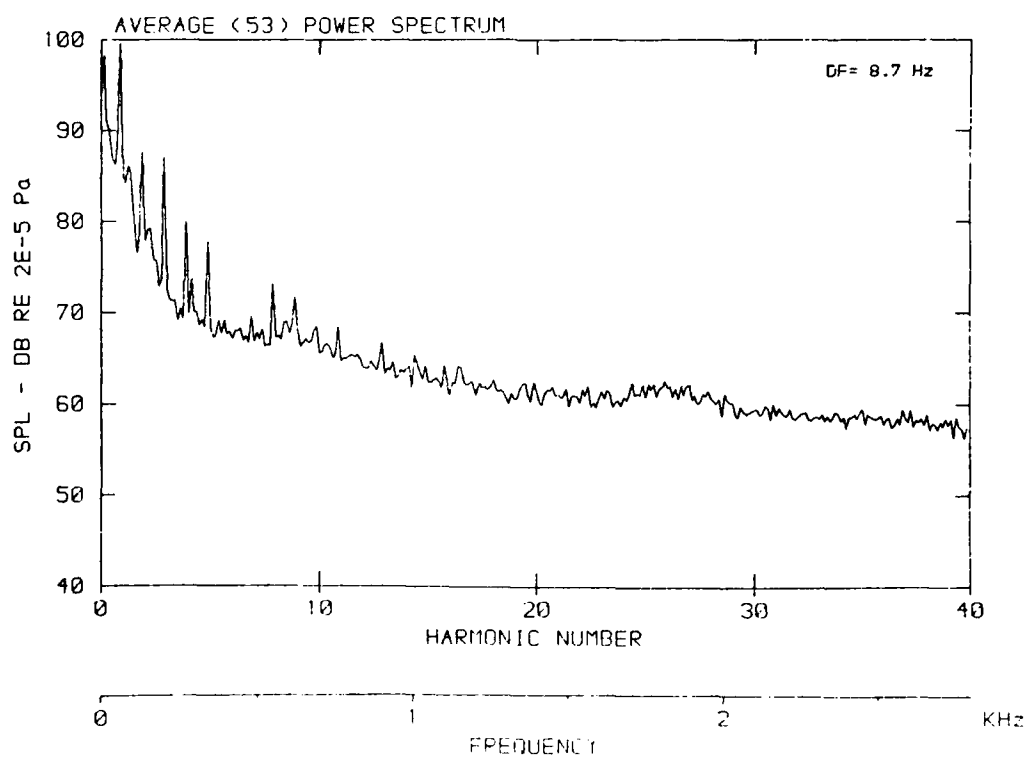
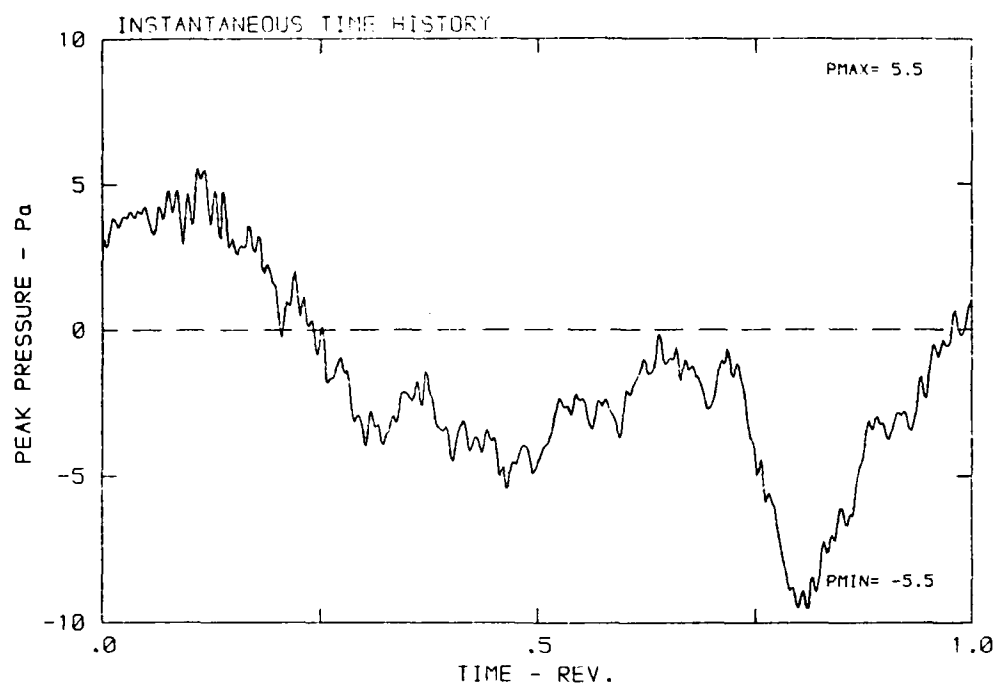
DATA POINT: GN-4 RUN: 148 MP: 9

β : 23.7° MH: .5829 n: 1800 rpm v/u : .267 ϕ : -7.4° T: 287.7 K



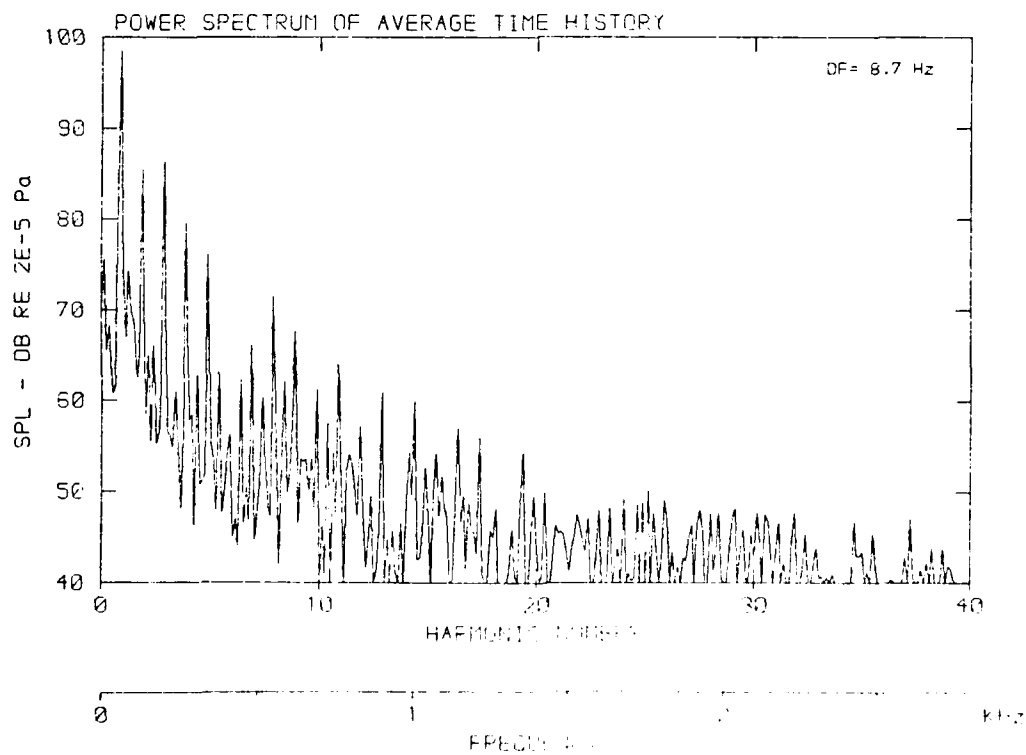
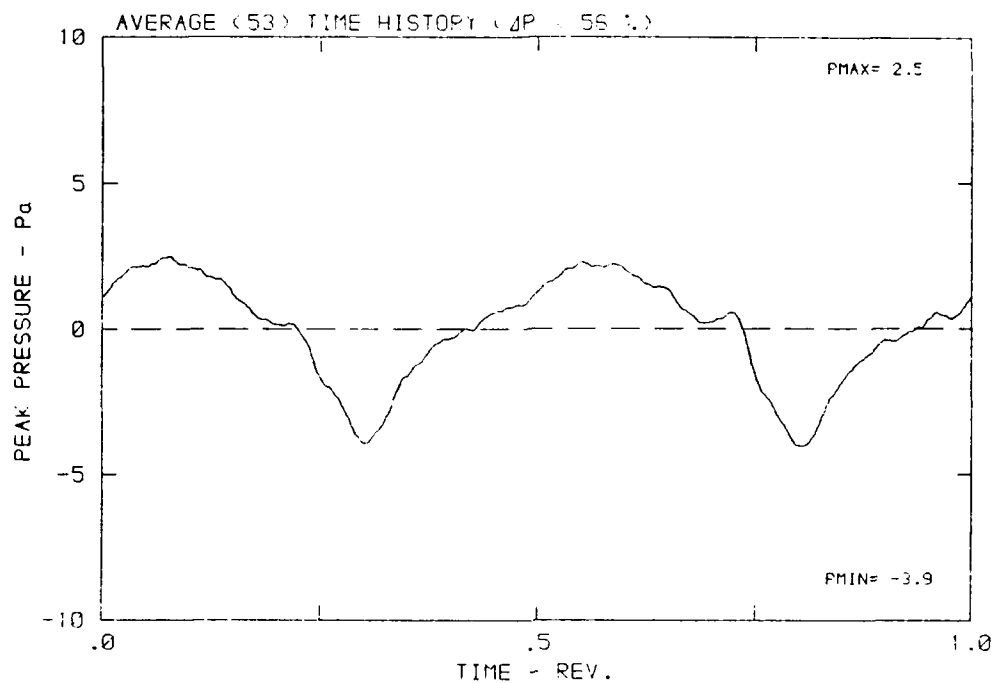
DATA POINT: GN-5 RUN: 149 MP: 1

β : 23.7° MH: .6735 n: 2100 rpm v_{zu} : .229 ϕ : -7.4° T: 298.2 K



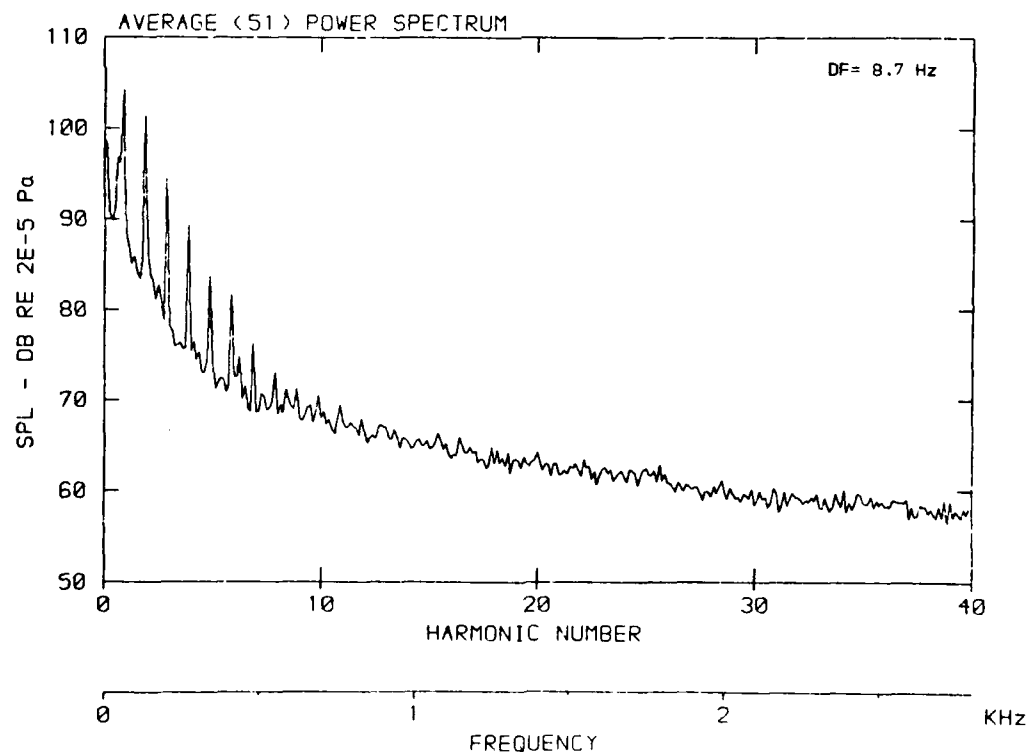
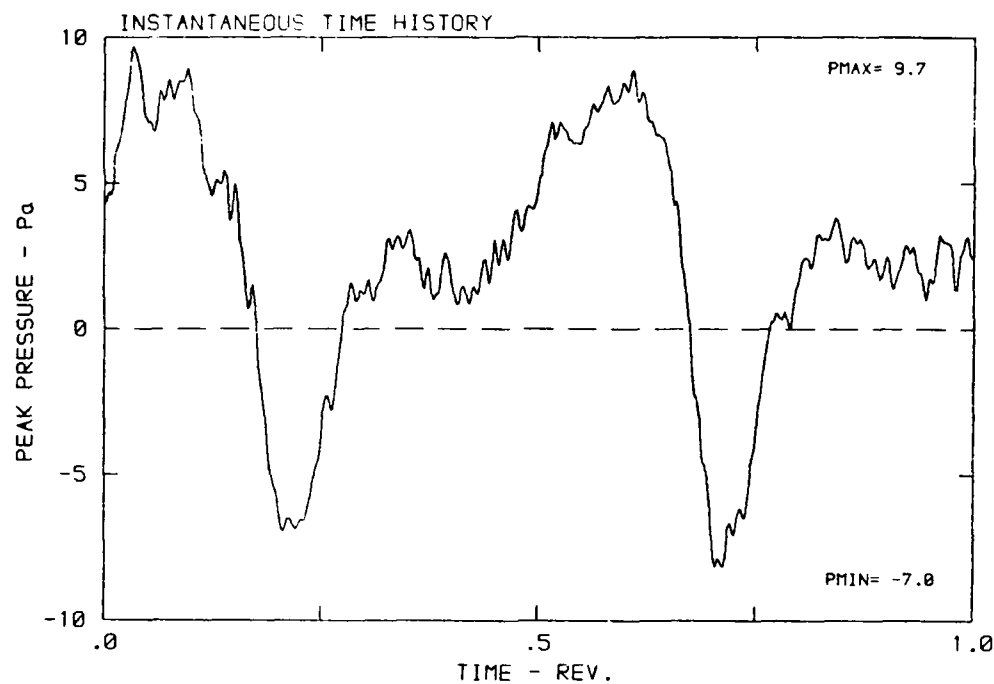
DATA POINT: GN-5 RUN: 149 NP: 1

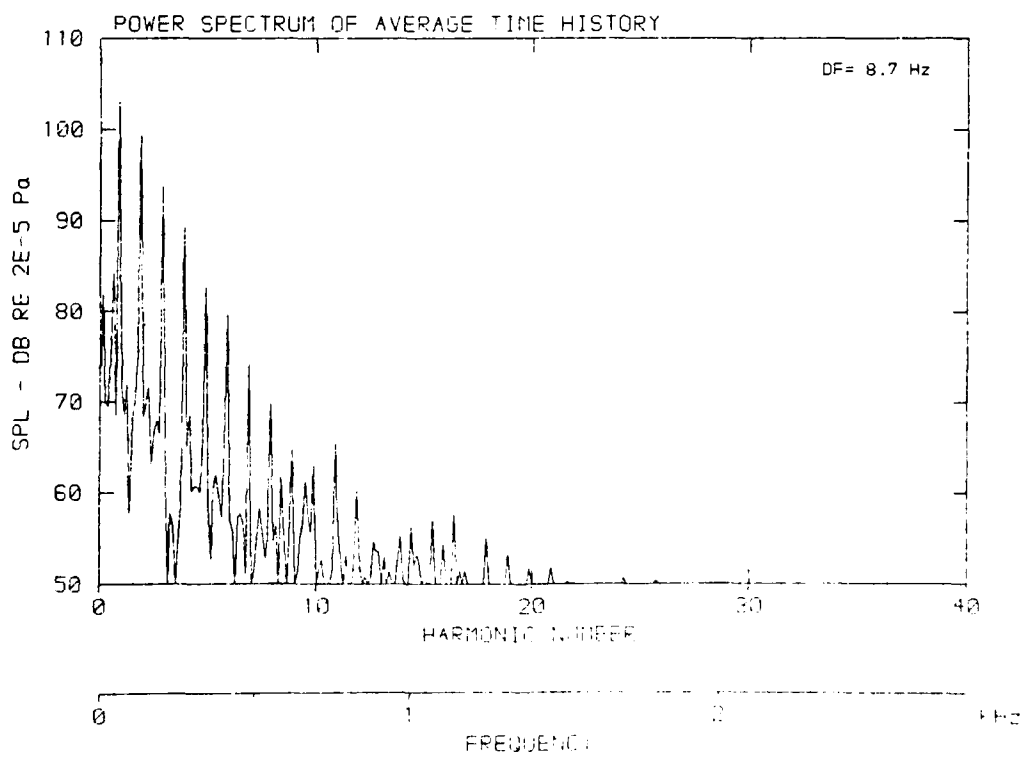
β : 23.7° MH: .6735 n: 2100 rpm v: .229 ϕ : -7.4° T: 239.2



DATA POINT: GN-5 RUN: 149 MP: 2

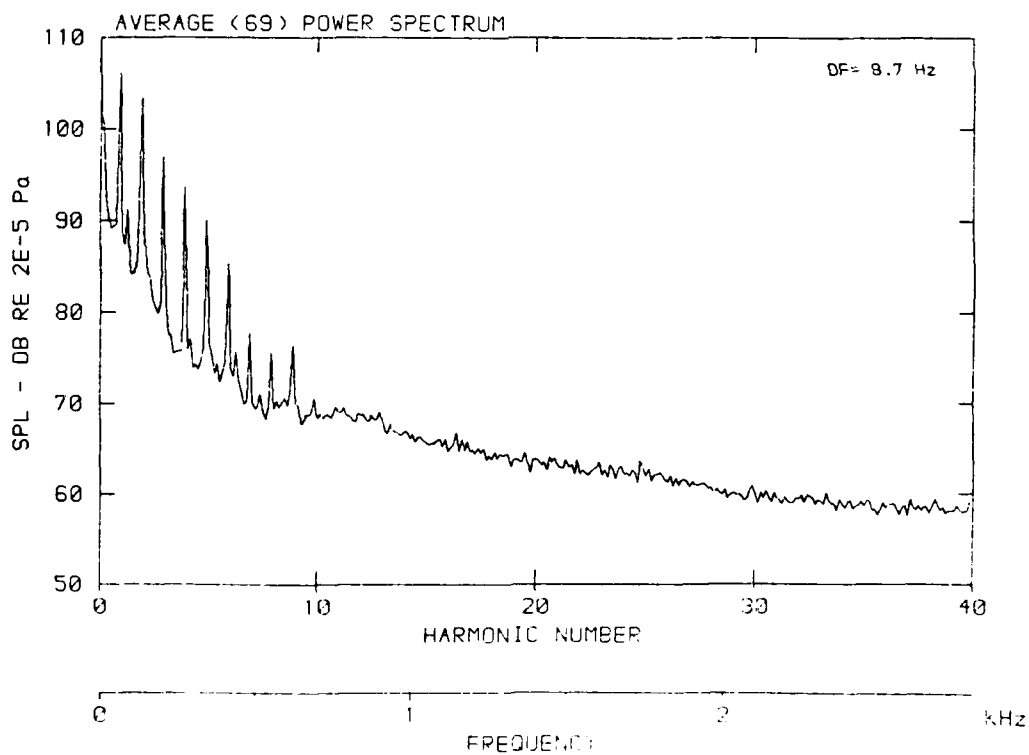
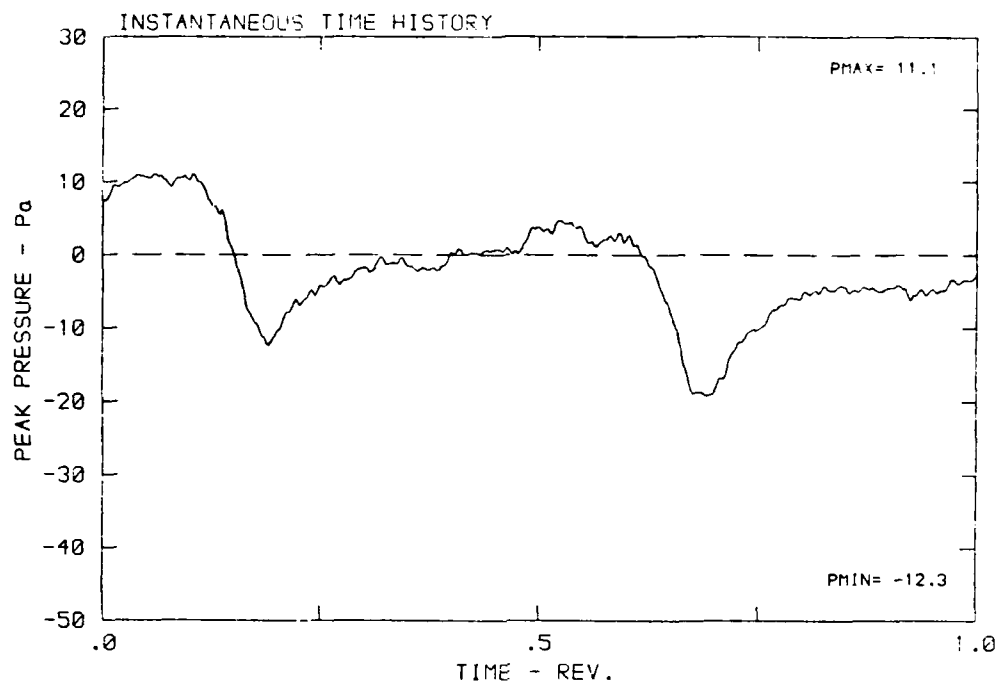
β : 23.7° MH: .6735 n: 2100 rpm v/u: .229 ϕ : -7.4° T: 288.2 K



$$\beta: 23.7^{\circ} \quad \text{MH: } .6725 \quad \text{H: } 2190 \text{ ppm} \quad \text{JH: } .229 \quad \phi: -7.4^{\circ} \quad \text{T: } 298.2 \text{ K}$$


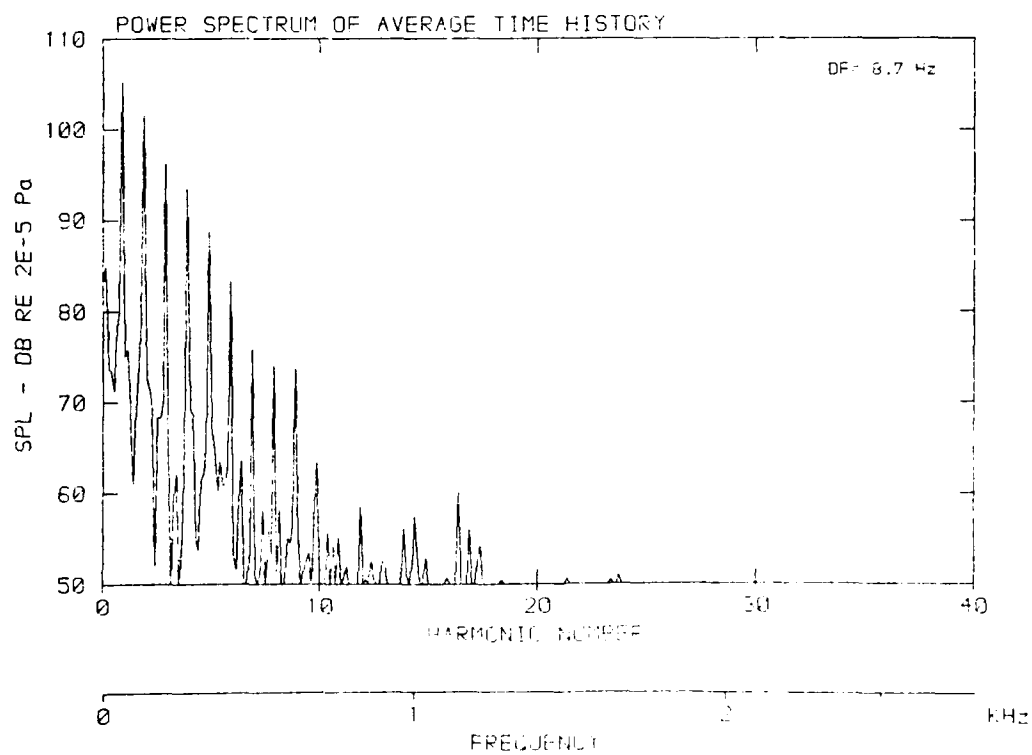
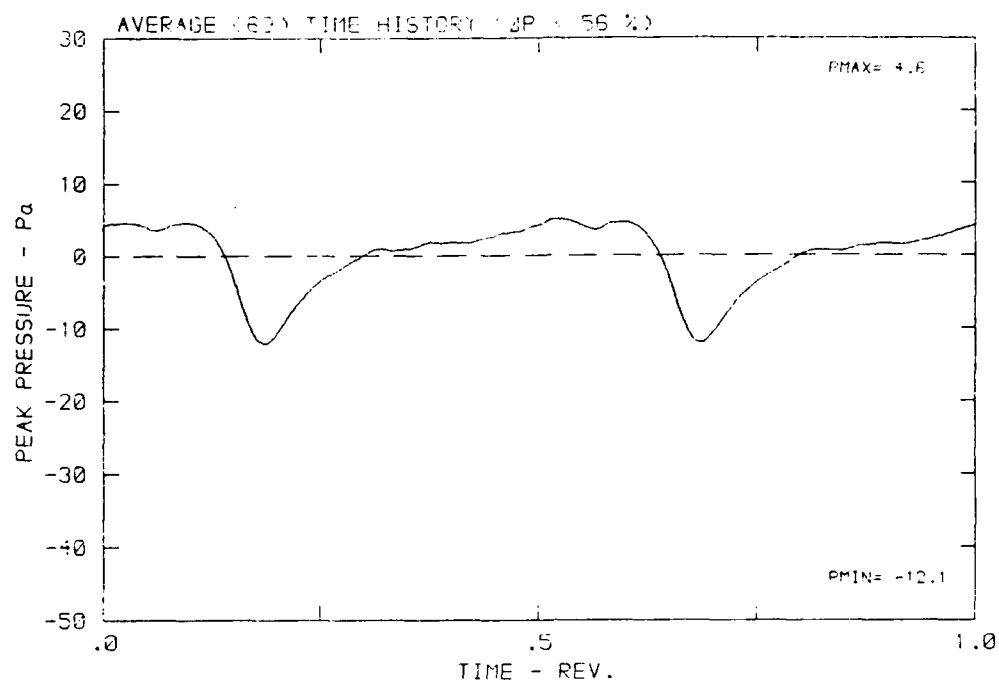
DATA POINT: GN-5 RUN: 147 RE: 3

β : 23.7° MH: .6735 n: 2120 rpm v_{zu} : .228 ϕ : -7.4° T: 29.13 s



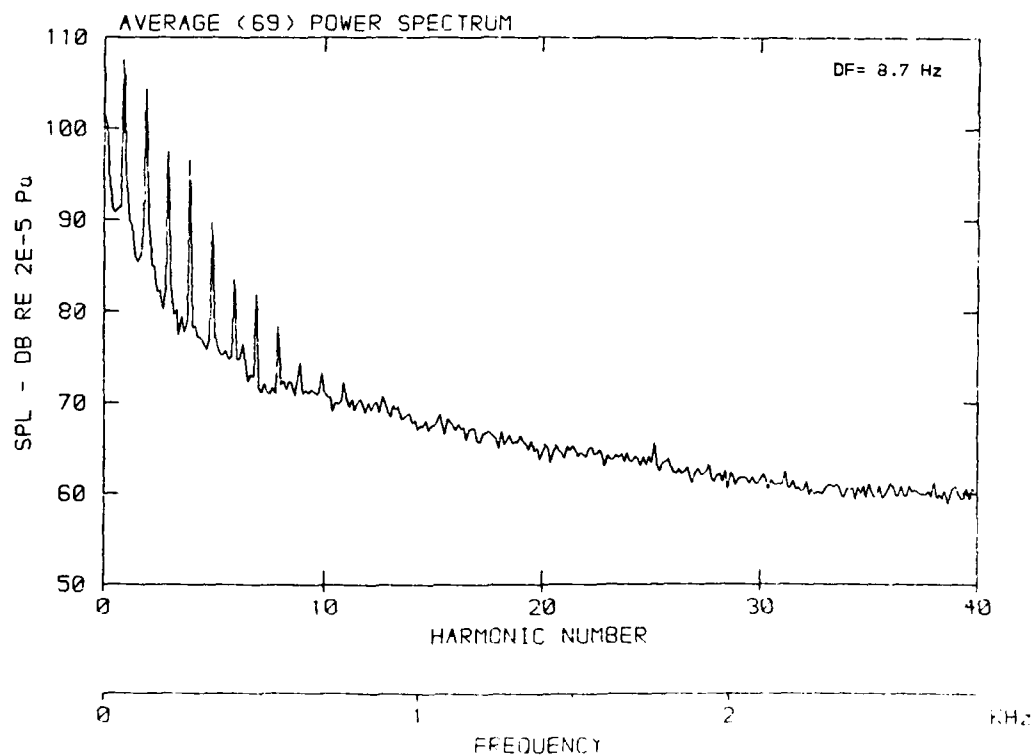
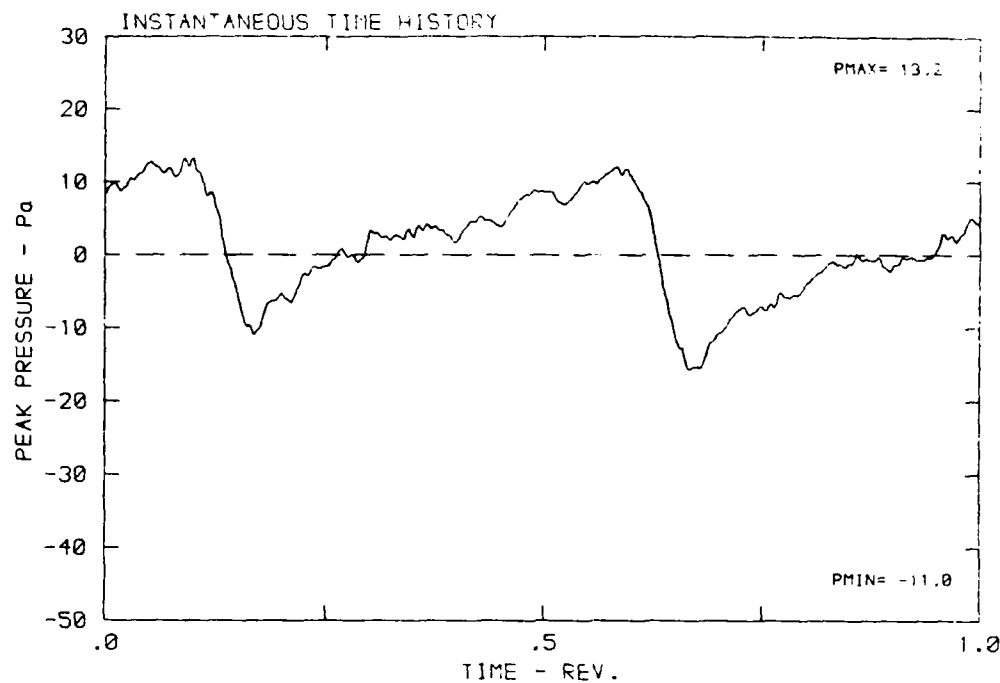
DATA POINT: GN-5 RUN: 149 MF: 3

β : 23.7° MH: .6735 n: 2100 rpm ν/ω : .229 ϕ : -7.4° T: 299.2 K



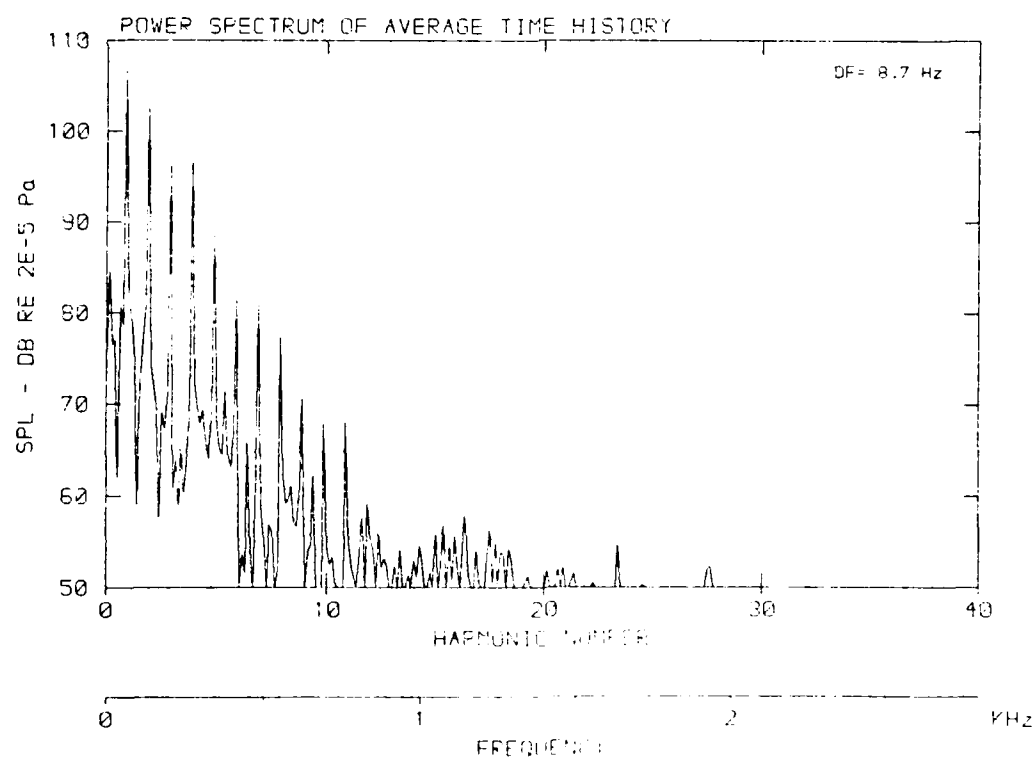
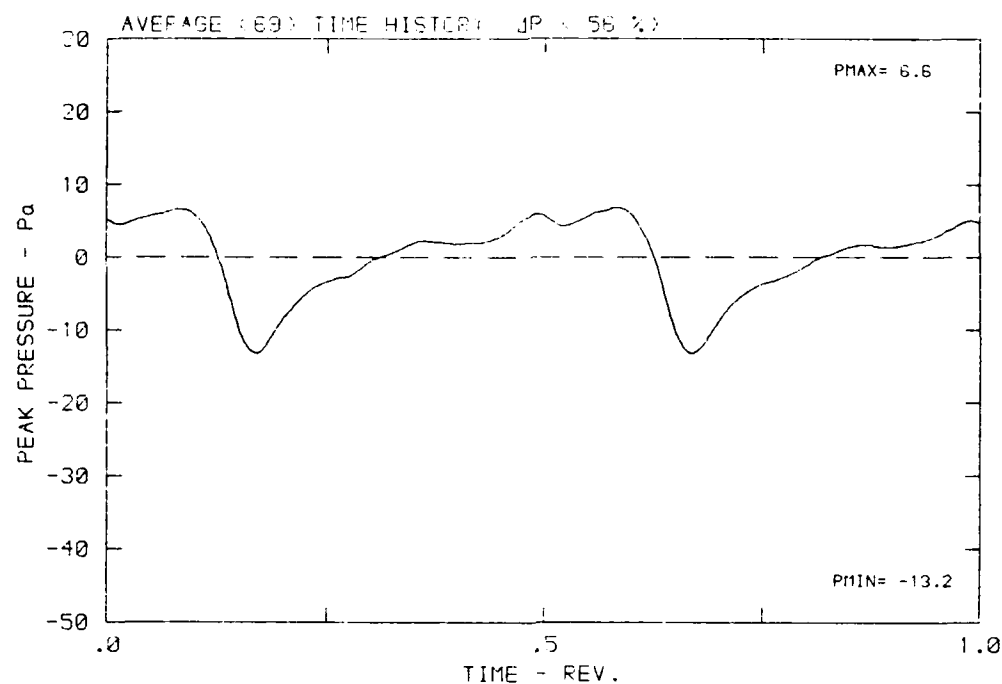
DATA POINT: GN-5 RUN: 149 MP: 4

β : 23.7° MH: .6735 n: 2100 rpm v/u : .229 ϕ : -7.4° T: 29.12 k



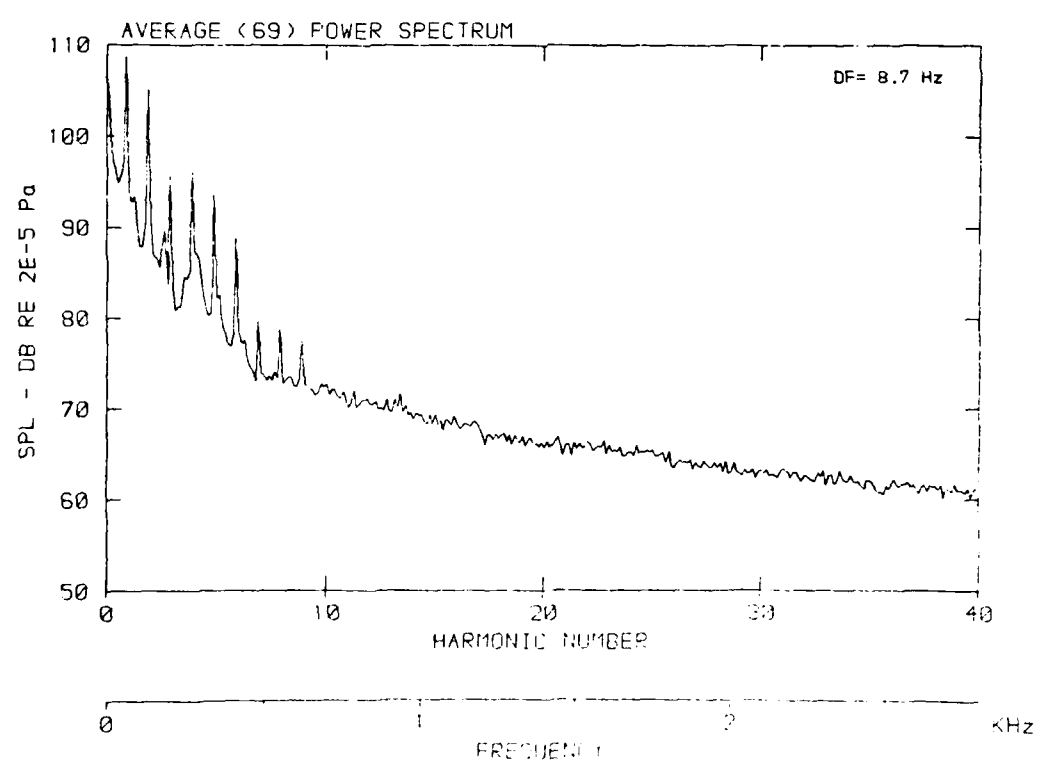
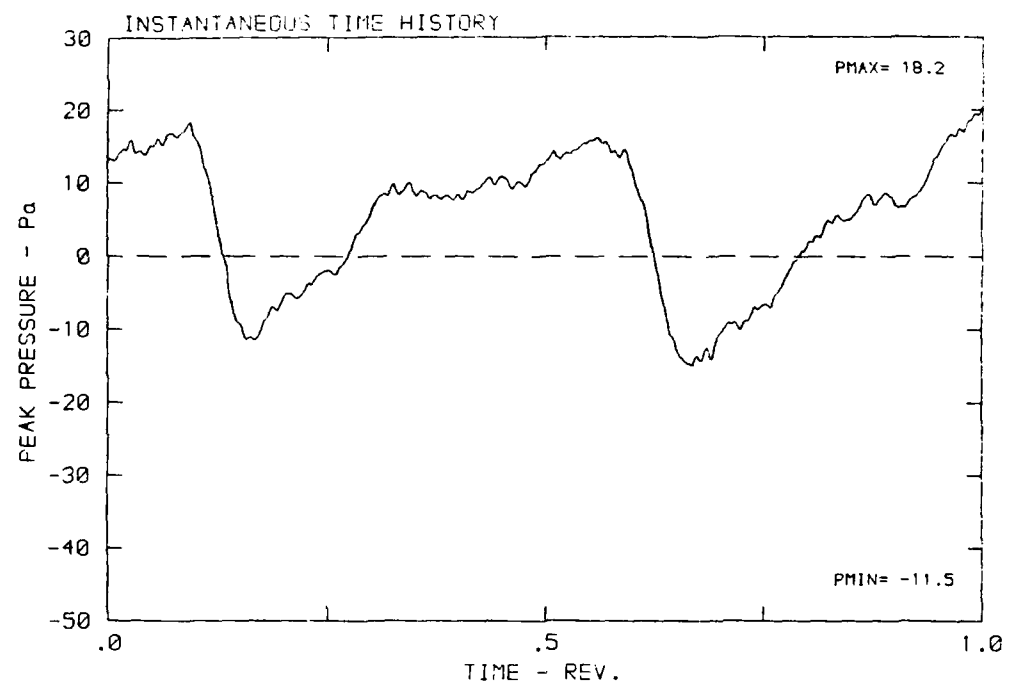
DATA POINT: GN-5 RUN: 148 MP: 4

β : 23.7° MH: .6735 n: 2100 rpm ν : .229 ϕ : -7.4° T: 288.2 K



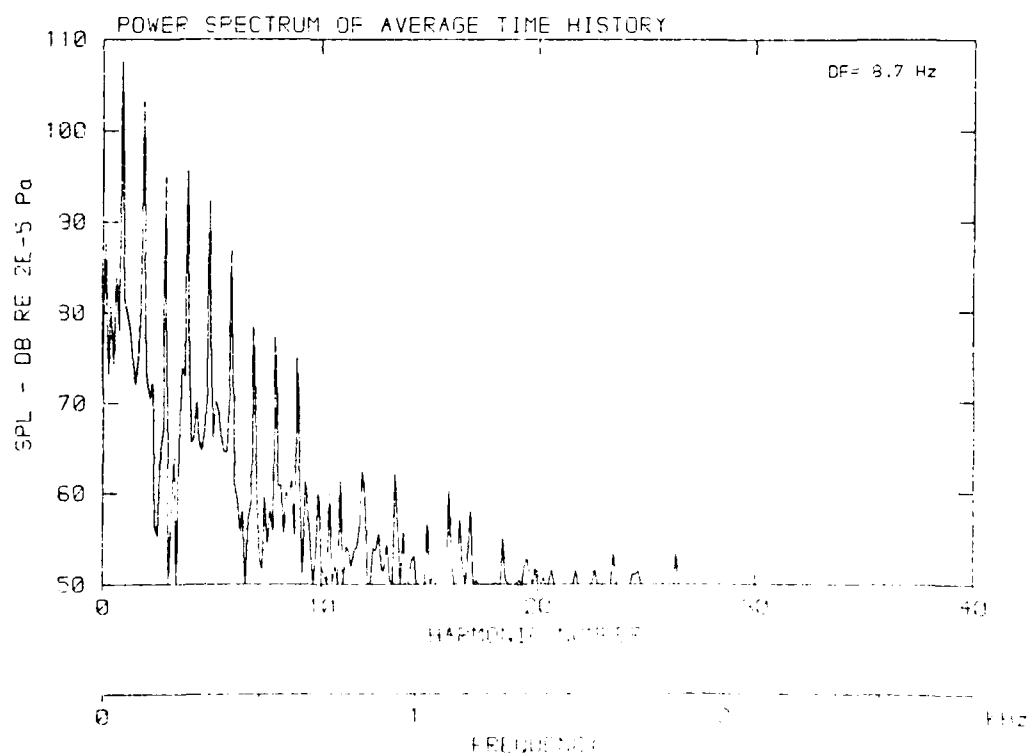
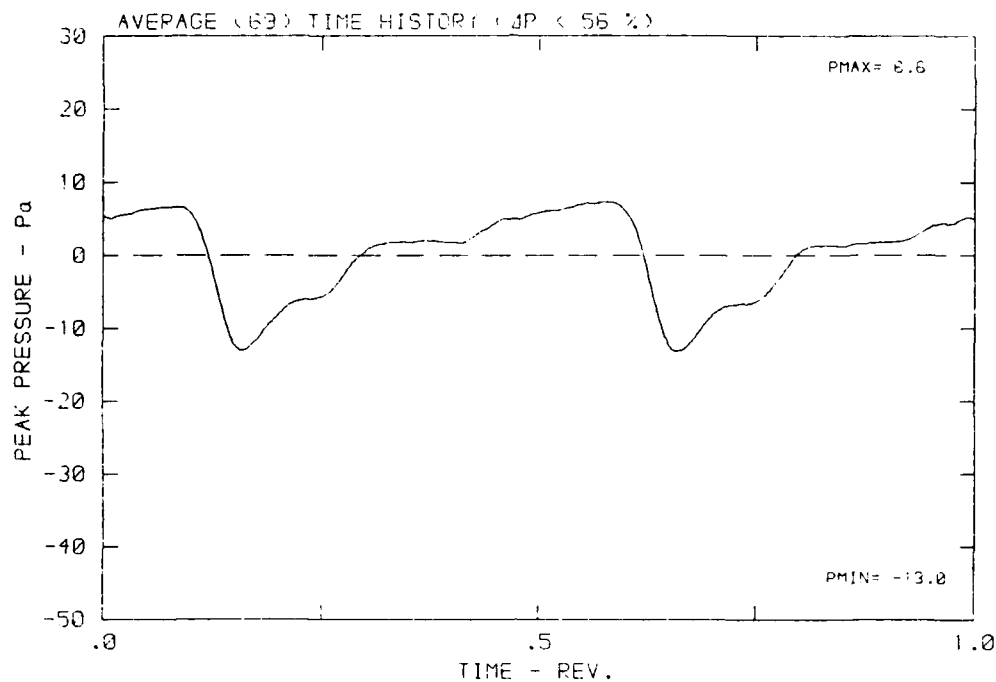
DATA POINT: GN-5 RUN: 149 MP: 5

β : 23.7° MH: .6735 n: 2100 rpm v/u : .229 ϕ : -7.4° T: 298.2 K



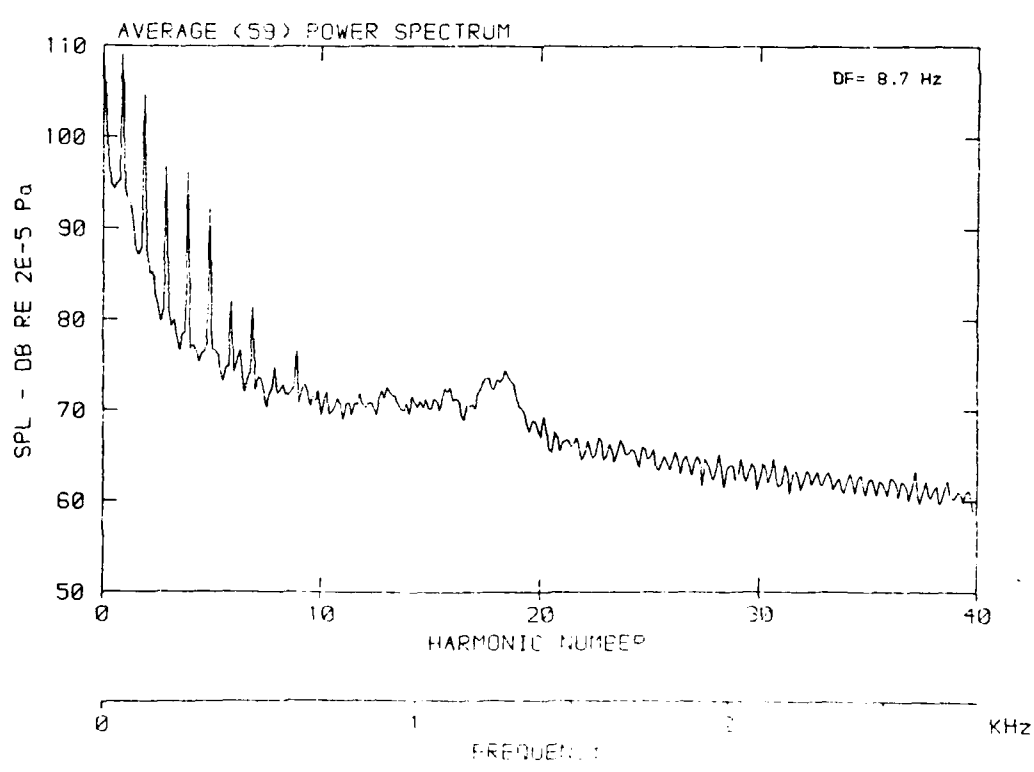
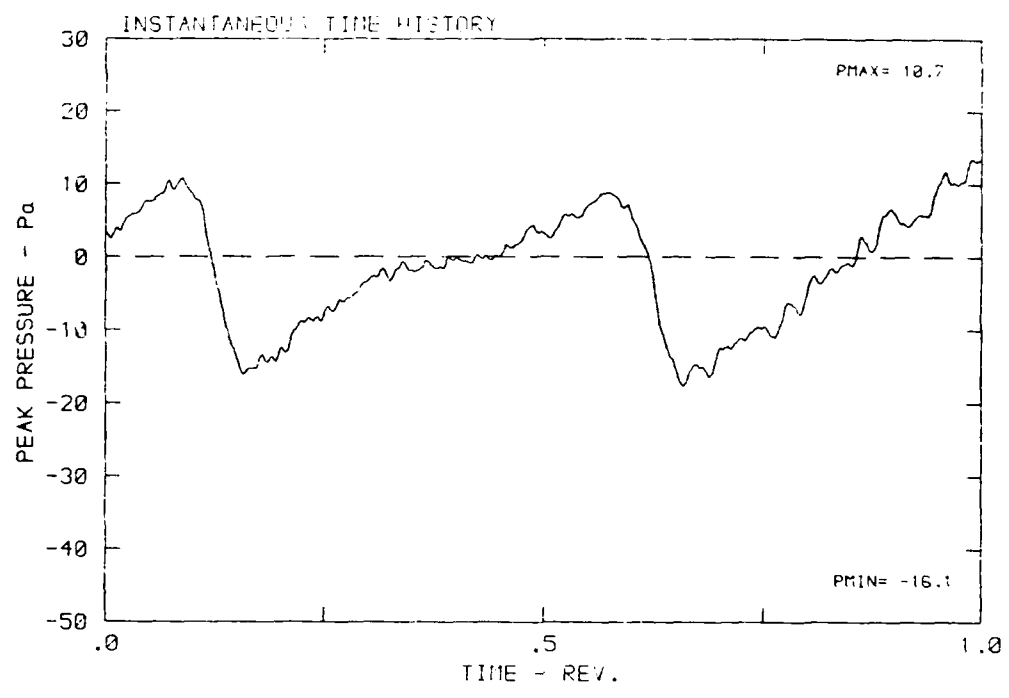
DATA POINT: GN-5 PUN: 143 ME: E

β : 23.7° MH: .6735 n: 2100 rpm vru: .229 ϕ : -7.4° T: 138.2 s



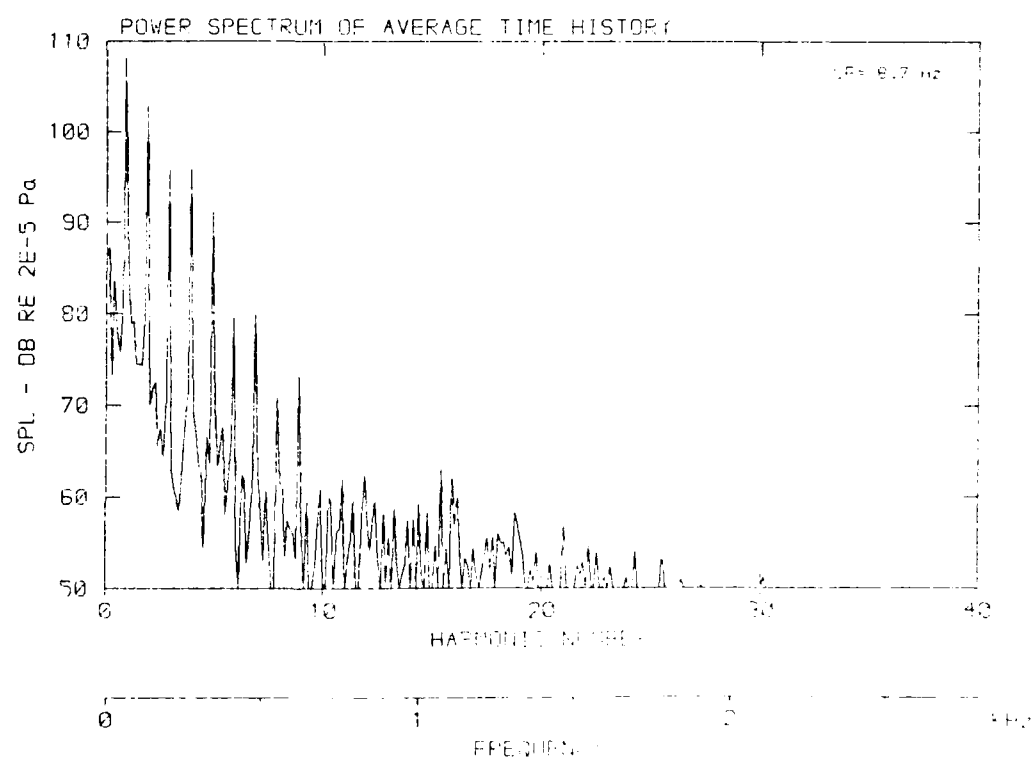
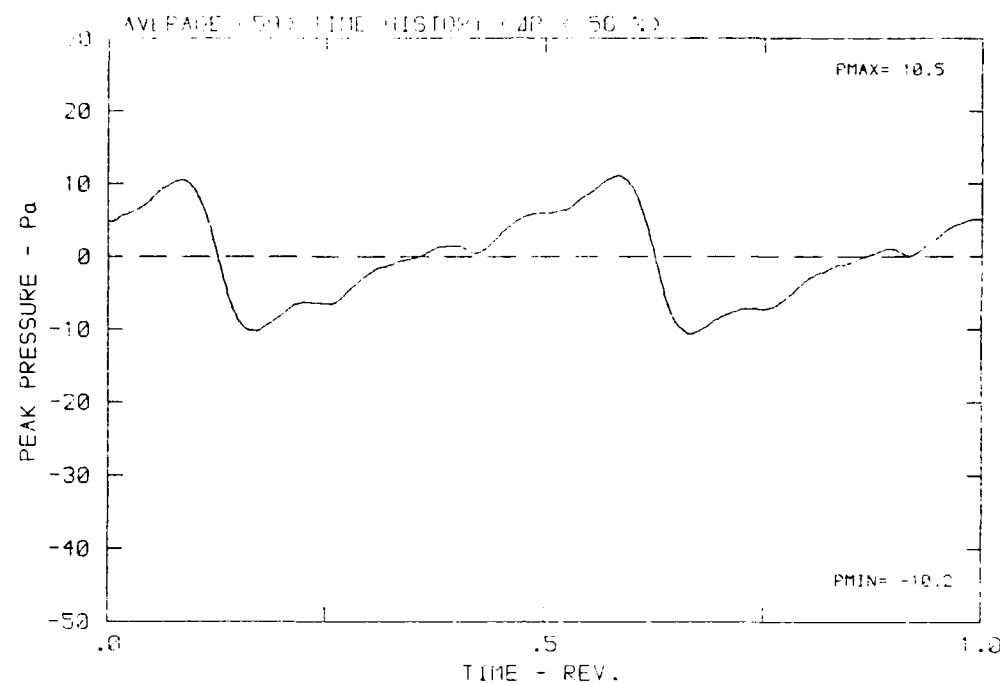
DATA POINT: BN-5 RUN: 48 RE: 1

β : 23.7° MH: .0737 n: 1100 rpm γ : .220 ϕ : -7.4° τ : 255.2 s



DATA POINT: GN-5 F IN: 145 MP: 5

β : 23.7° NH: .6735 n: 2100 rpm ν/ω : .229 ϕ : -7.4° T: 288.2 K



AD-A174 988

DFVLR/FAA (DEUTSCHE FORSCHUNGS-UND VERSUCHSANSTALT FUER LUFT UND RAUMFAHR.. (U) DEUTSCHE FORSCHUNGS- UND VERSUCHSANSTALT FUER LUFT- UND RAUMF..

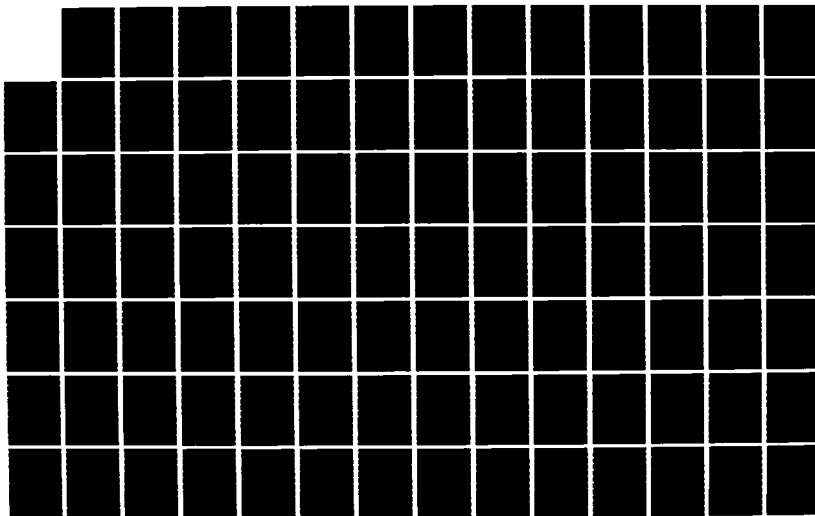
2/6

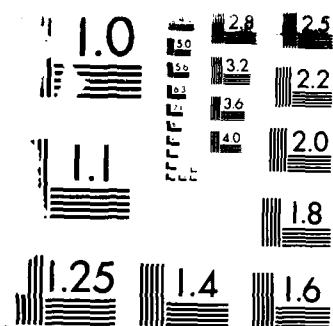
UNCLASSIFIED

M M DOBRZYNSKI ET AL. 1986

F/G 20/1

NL

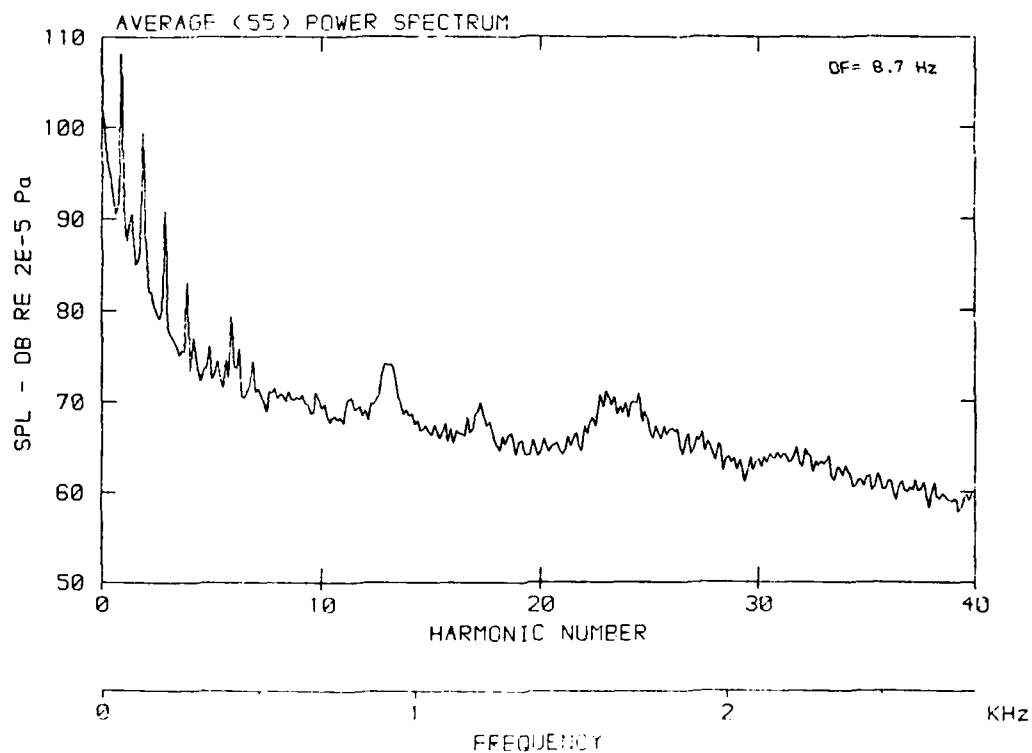
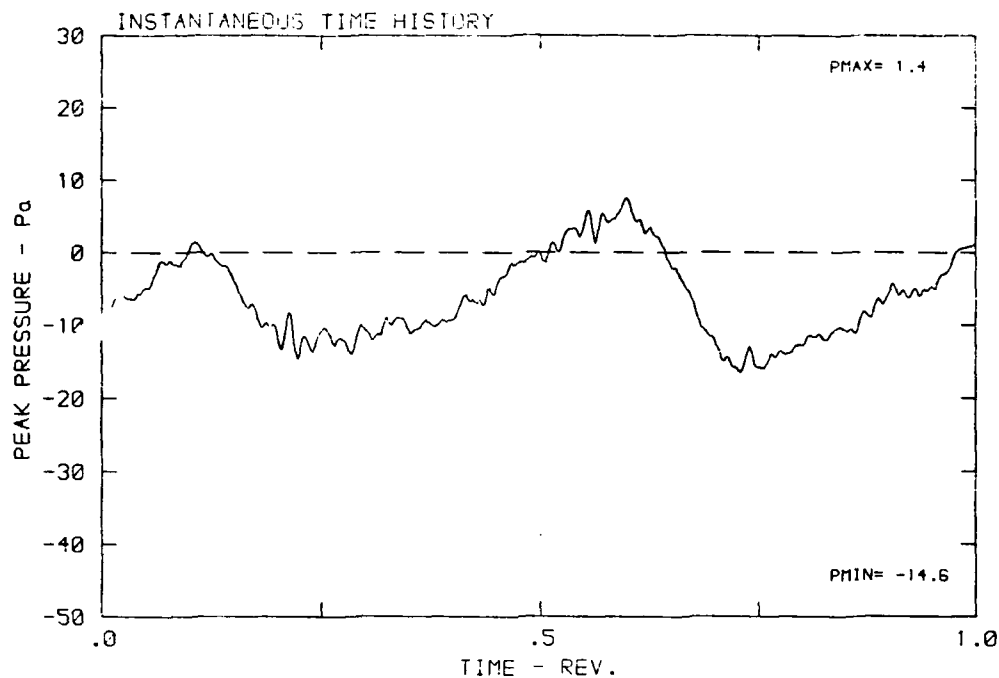




U.S. GOVERNMENT PRINTING OFFICE: 1963 O - 348-100

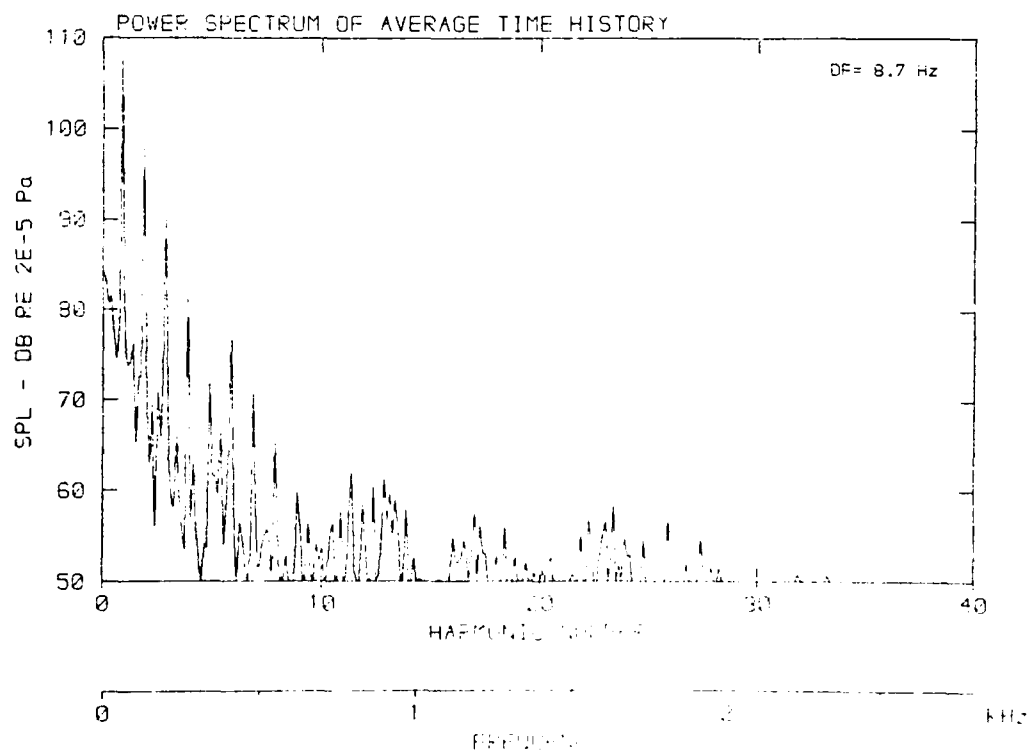
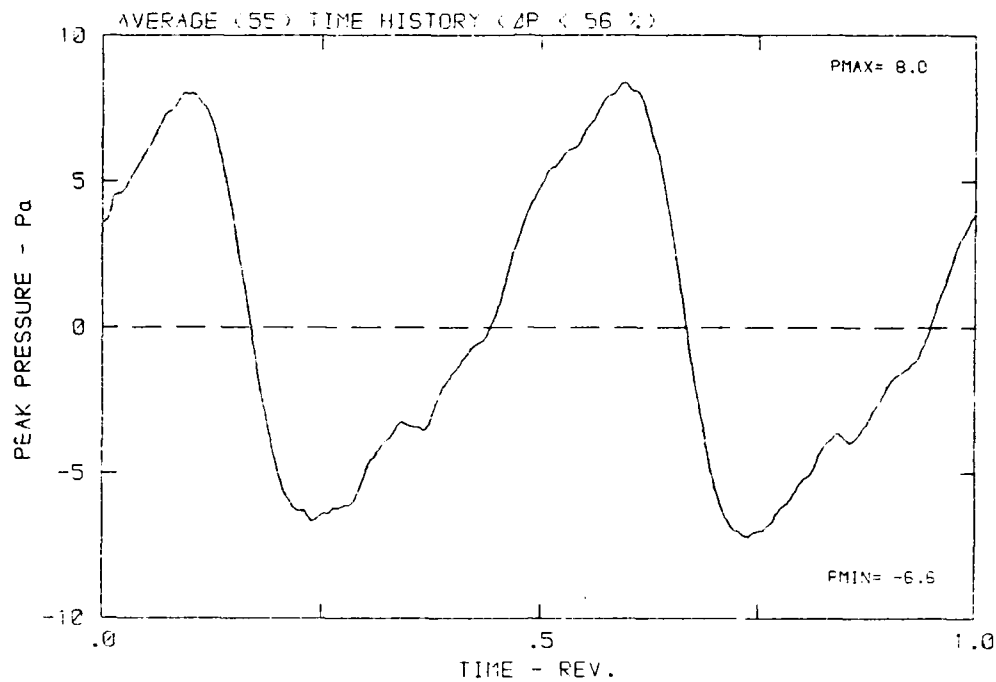
DATA POINT: GN-E RUN: 149 MP: 7

β : 23.7° MH: .6735 n: 2100 rpm μ : .029 ϕ : -7.4° δ : 289.2°



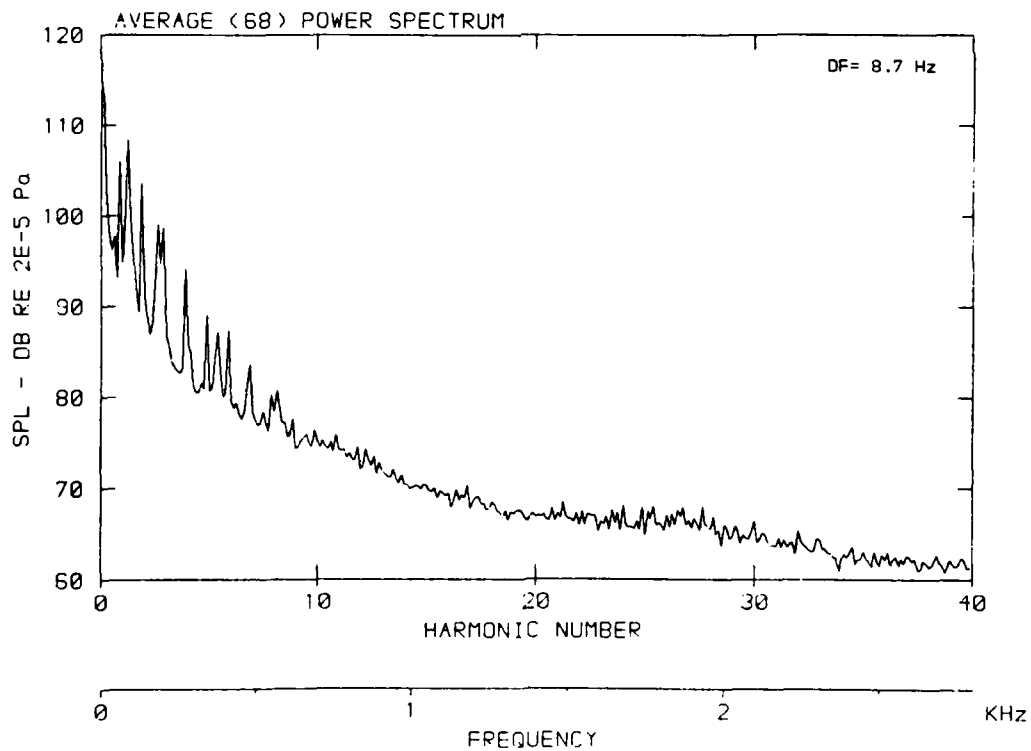
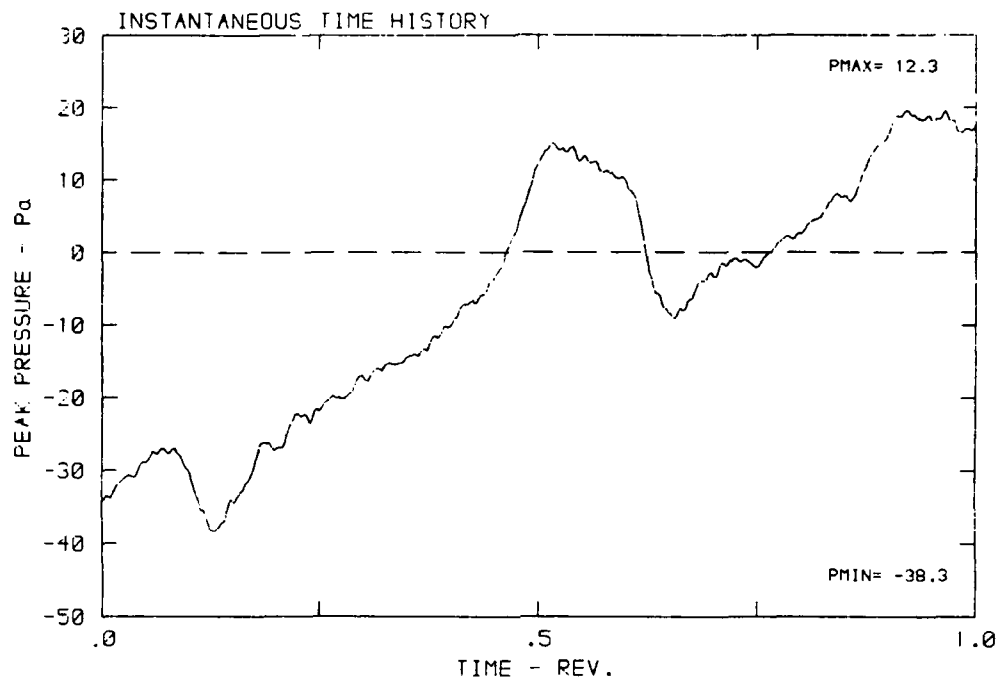
DATA POINTS: 51-5 RUN: 149 MF: 7

β : 23.7° MH: .6735 n: 2100 rpm v/u : .229 ϕ : -7.4° T: 285.2 K



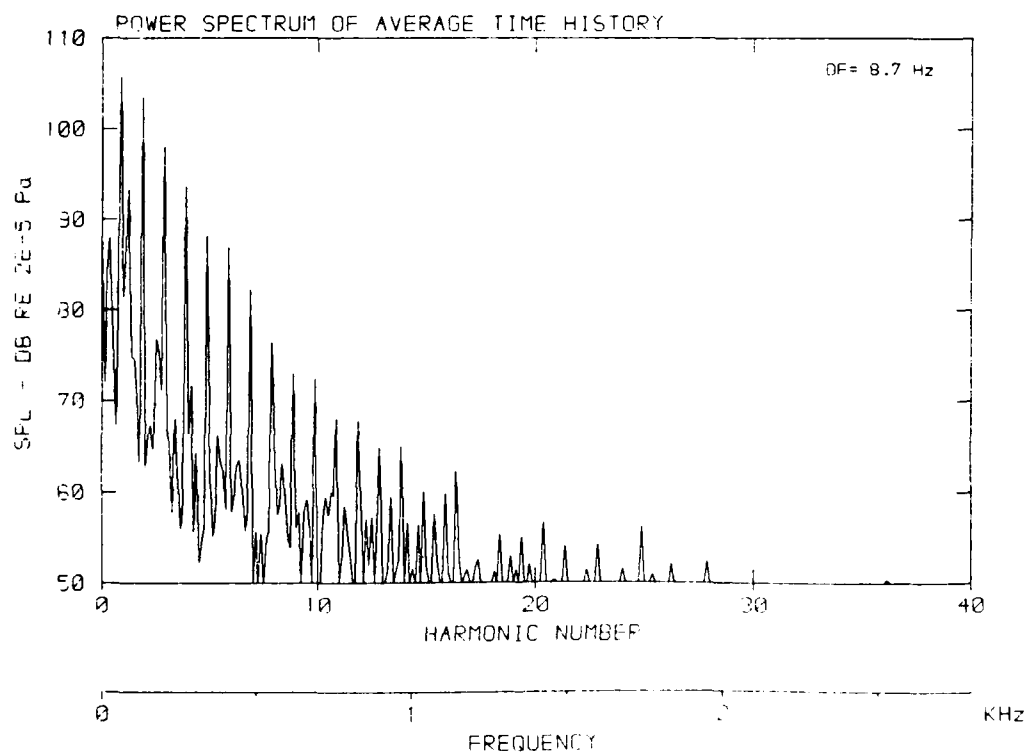
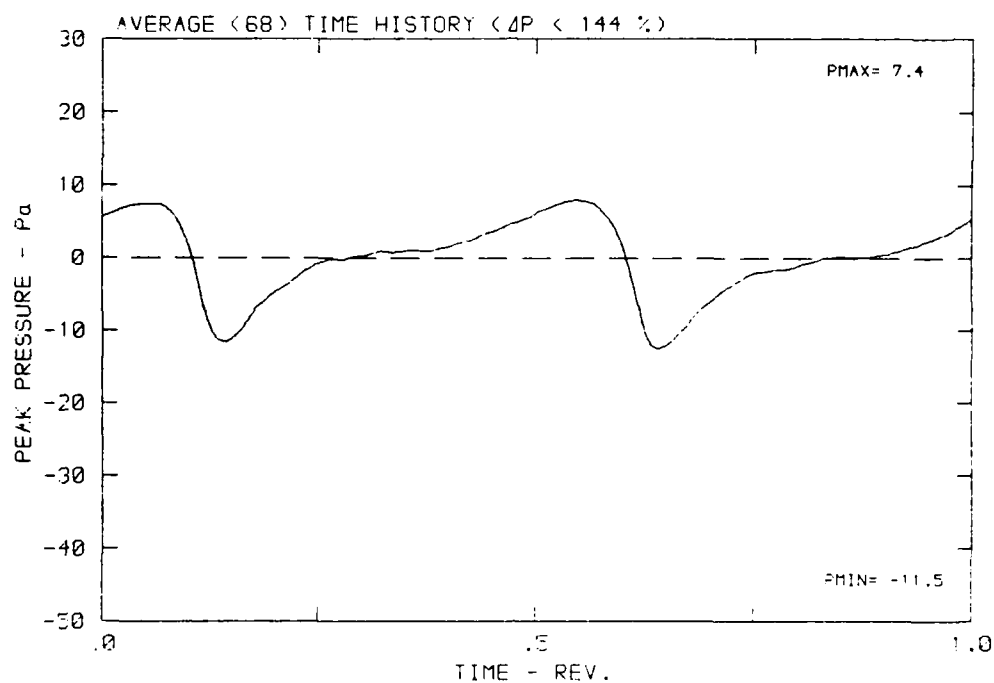
DATA POINT: GN-5 RUN: 149 MP: 8

β : 23.7° MH: .6735 n: 2100 rpm v/u : .229 ϕ : -7.4° T: 288.2 K



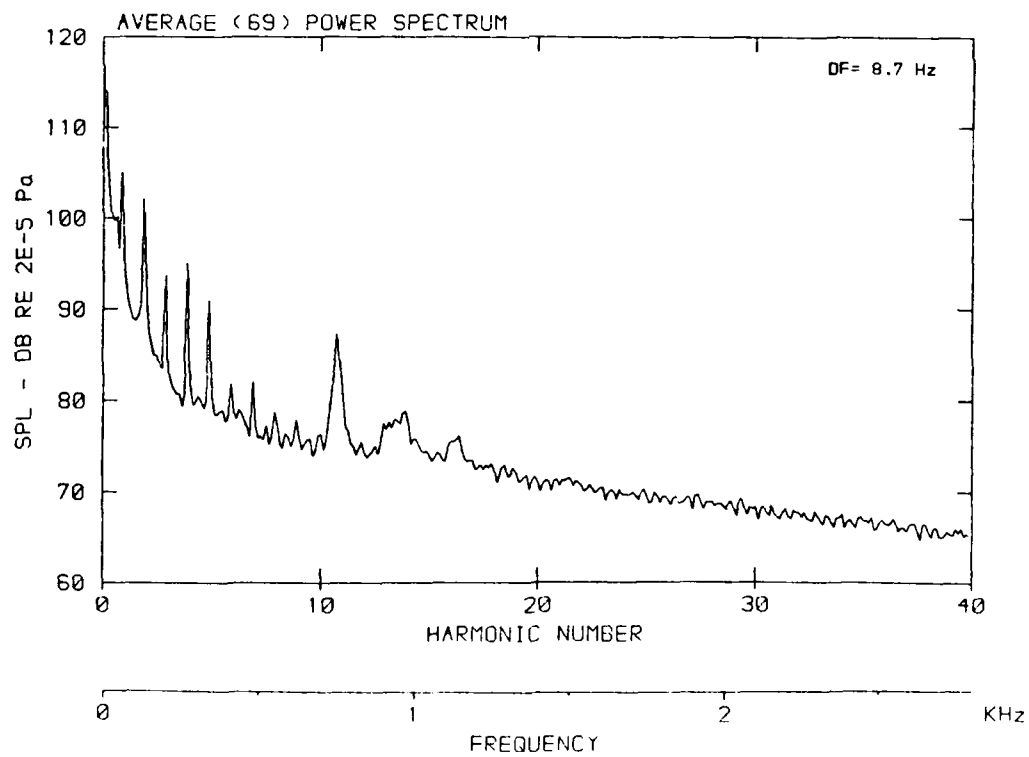
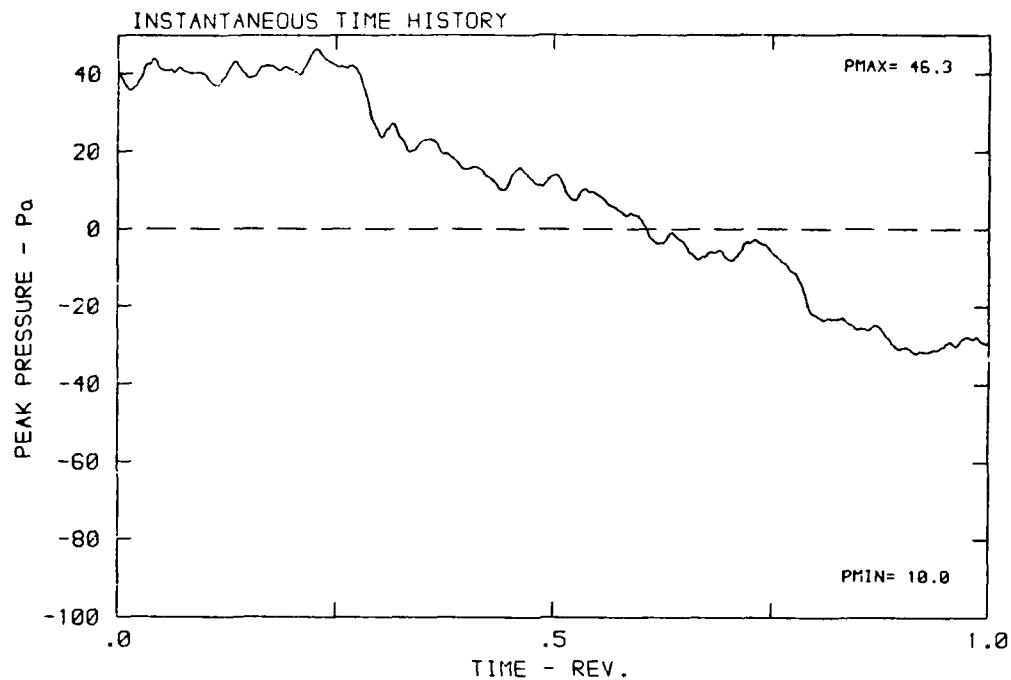
DATA POINT: GN-5 RUN: 149 MP: 8

β : 23.7° MH: .6735 n: 2100 rpm v/u: .229 ϕ : -7.4° T: 288.2 K



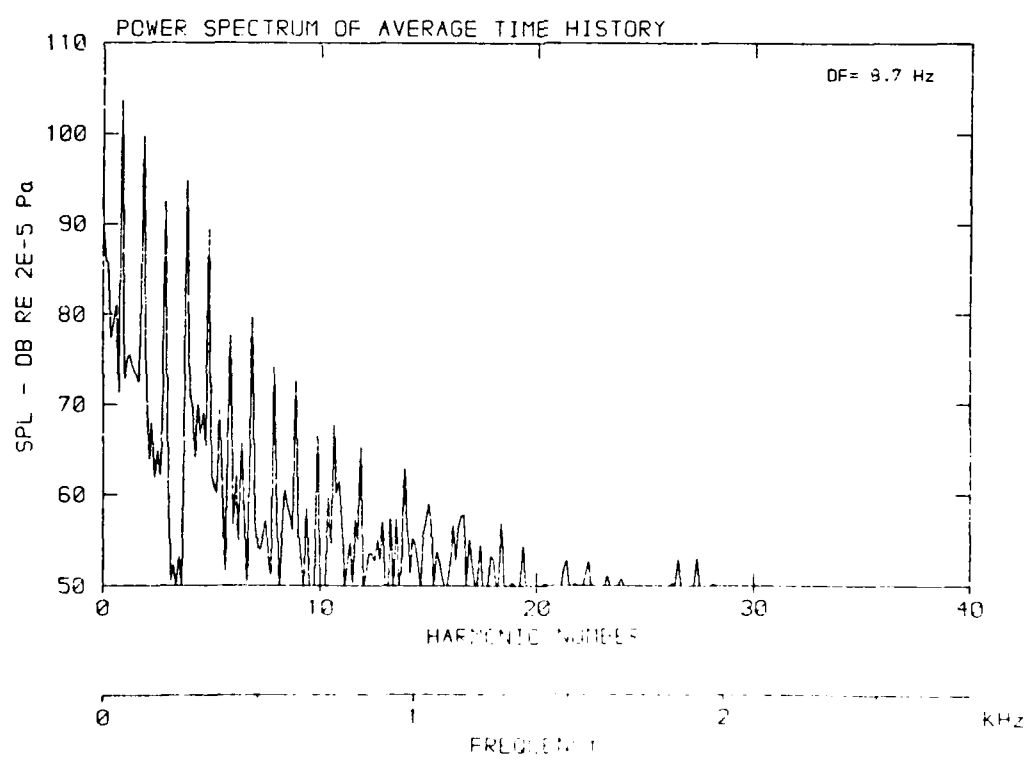
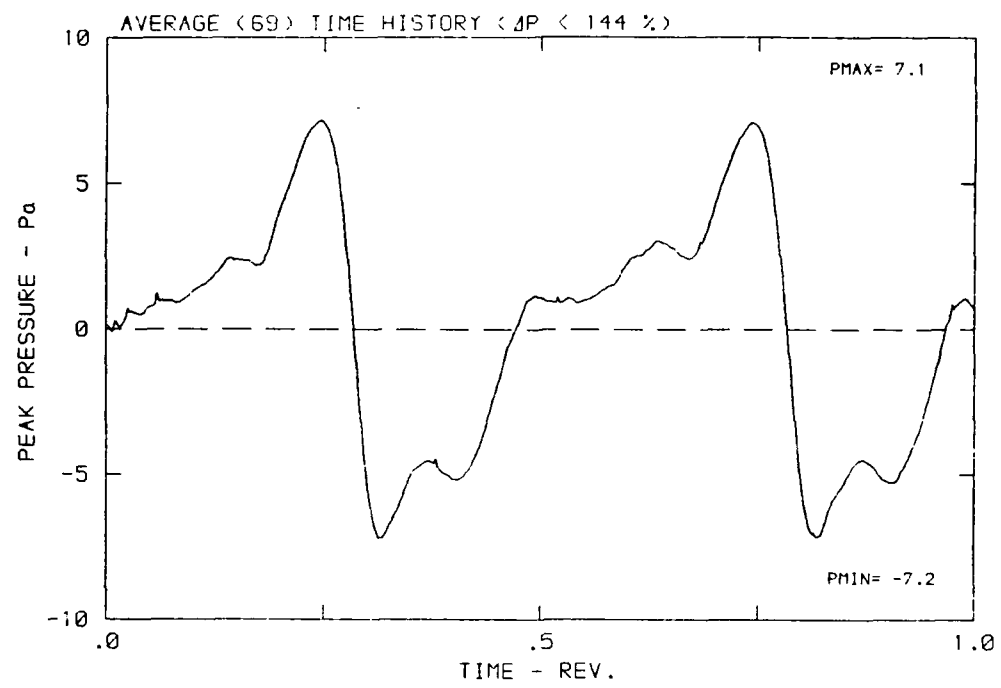
DATA POINT: GN-5 RUN: 149 MP: 9

β : 23.7° MH: .6735 n: 2100 rpm v/u: .229 ϕ : -7.4° T: 288.2 K



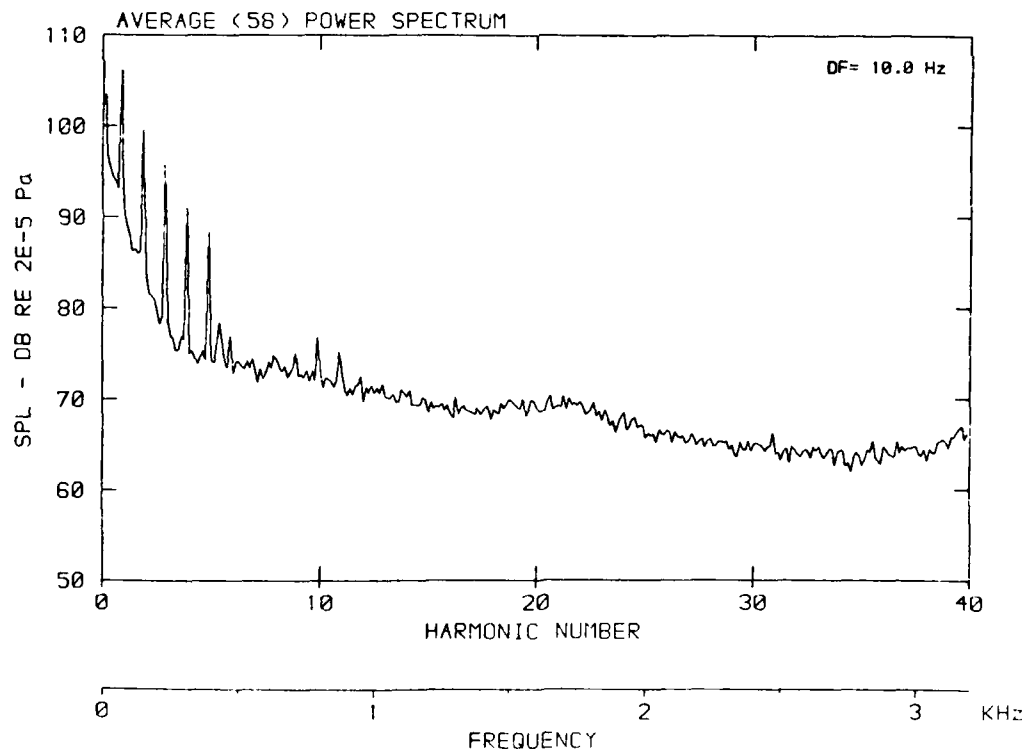
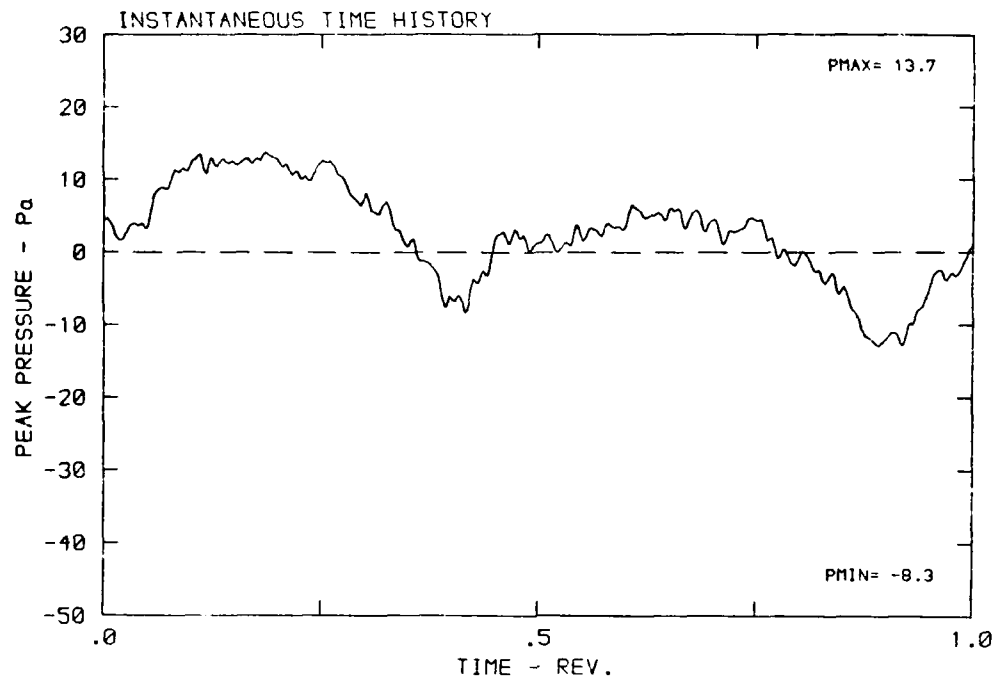
DATA POINT: GN-5 RUN: 149 MP: 9

β : 23.7° MH: .6735 n: 2100 rpm v/u : .229 ϕ : -7.4° T: 288.2 K



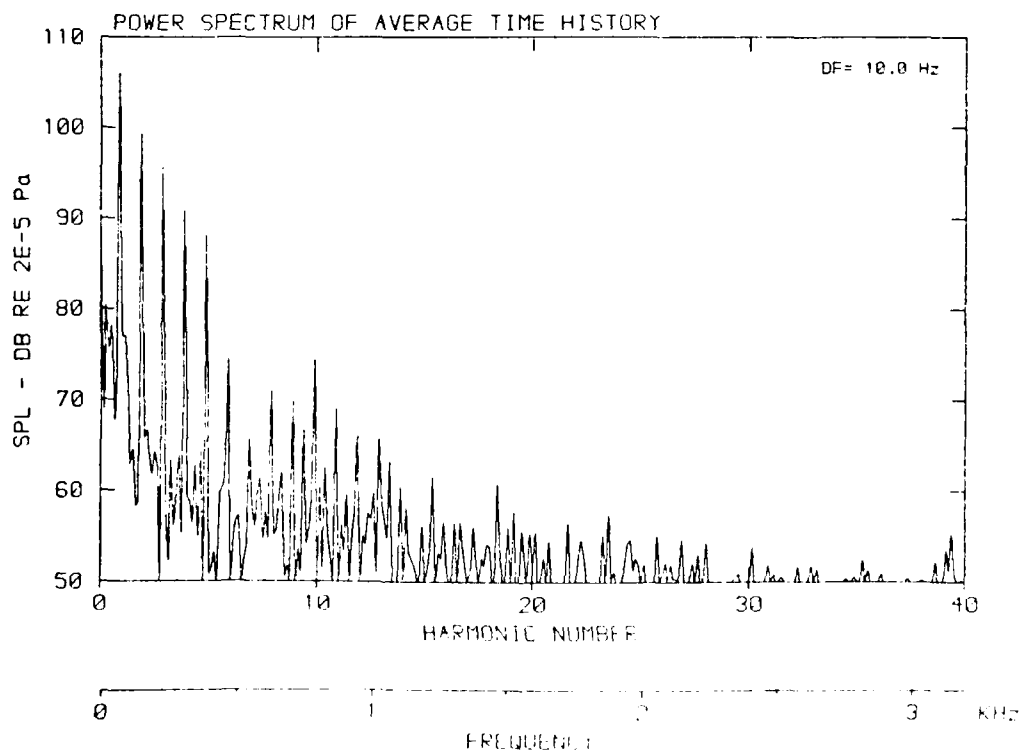
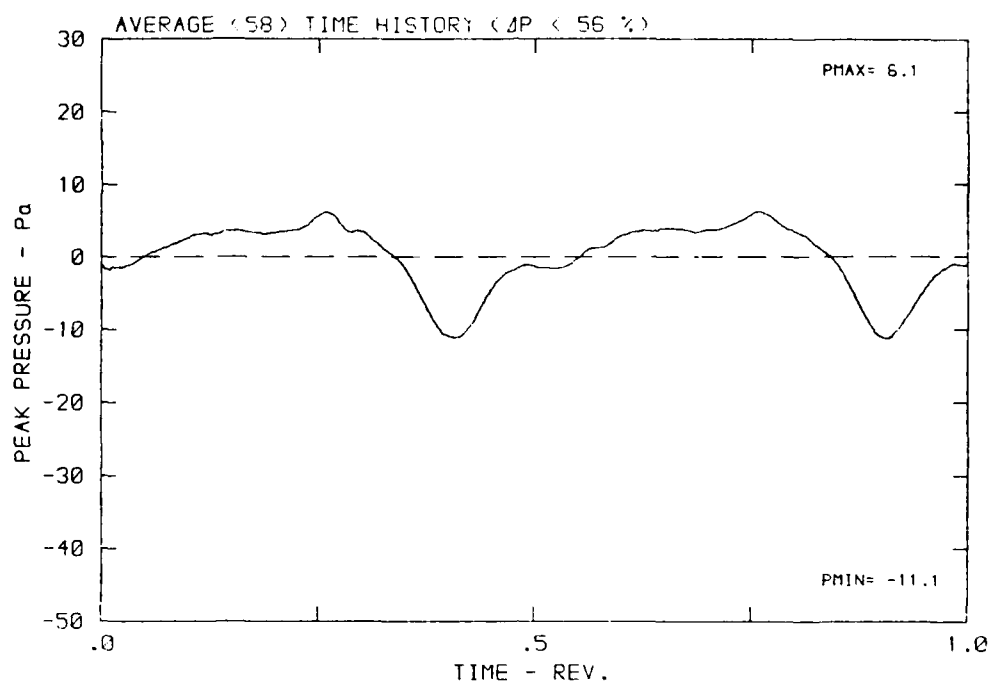
DATA POINT: GN-6 RUN: 150 MP: 1

β : 23.7° MH: .7755 n: 2400 rpm v/u : .262 ϕ : -7.4° T: 288.2 K



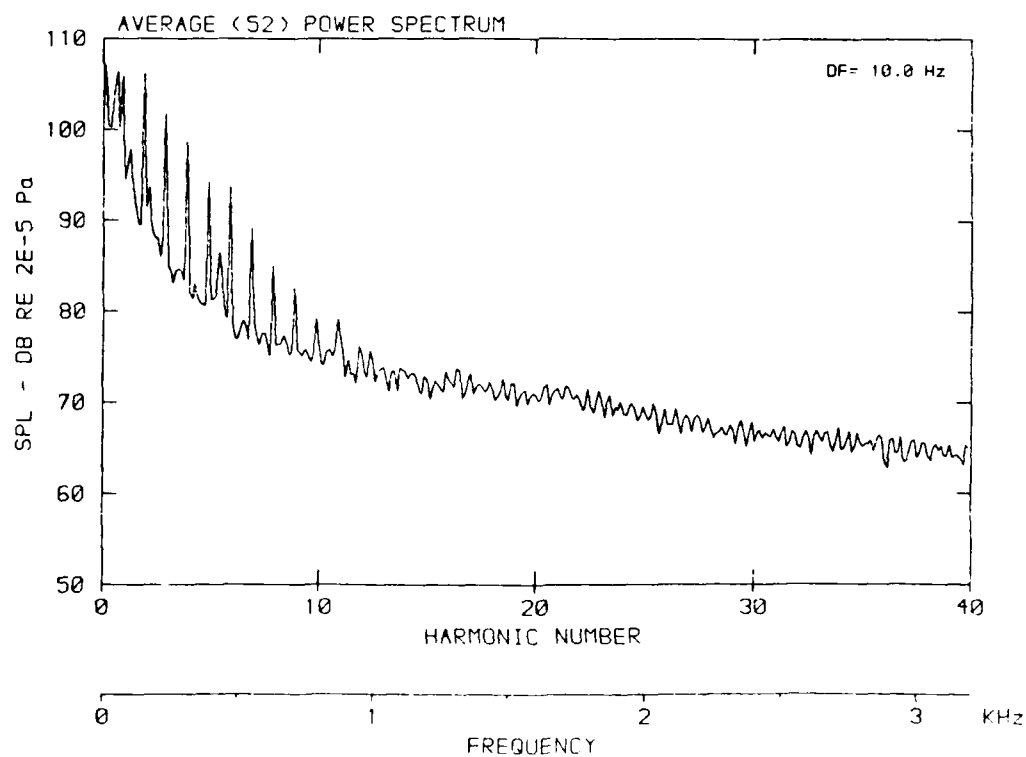
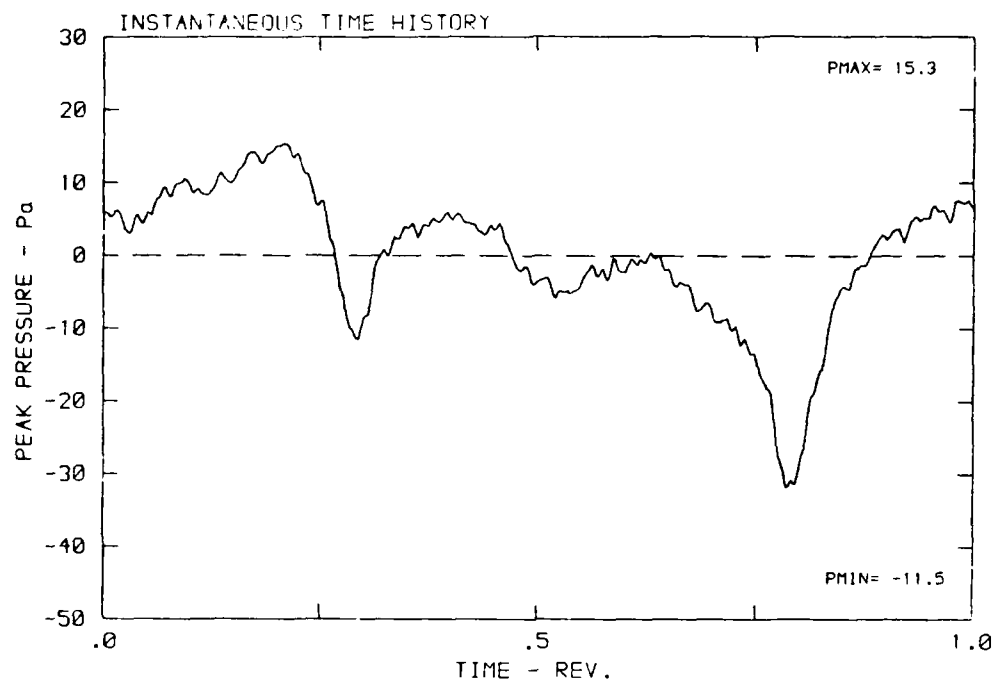
DATA POINT: GN-6 RUN: 150 MP: 1

β : 23.7° MH: .7755 n: 2400 rpm v/u : .262 ϕ : -7.4° T: 288.2 K



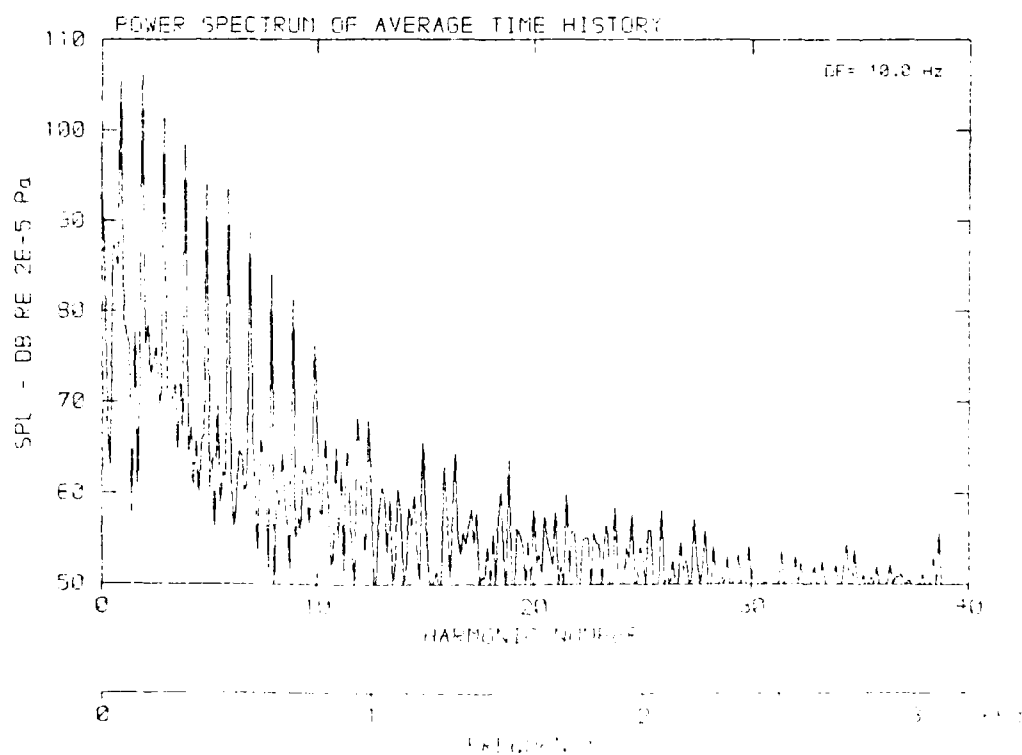
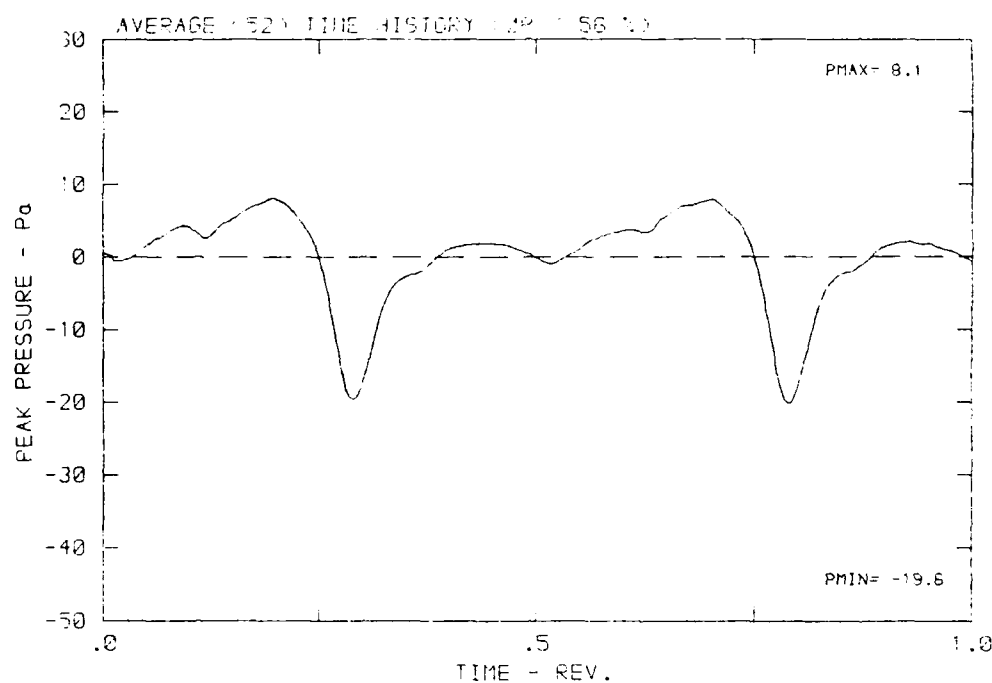
DATA POINT: GN-6 RUN: 150 MP: 2

β : 23.7° MH: .7755 n: 2400 rpm v/u : .262 ϕ : -7.4° T: 288.2 K



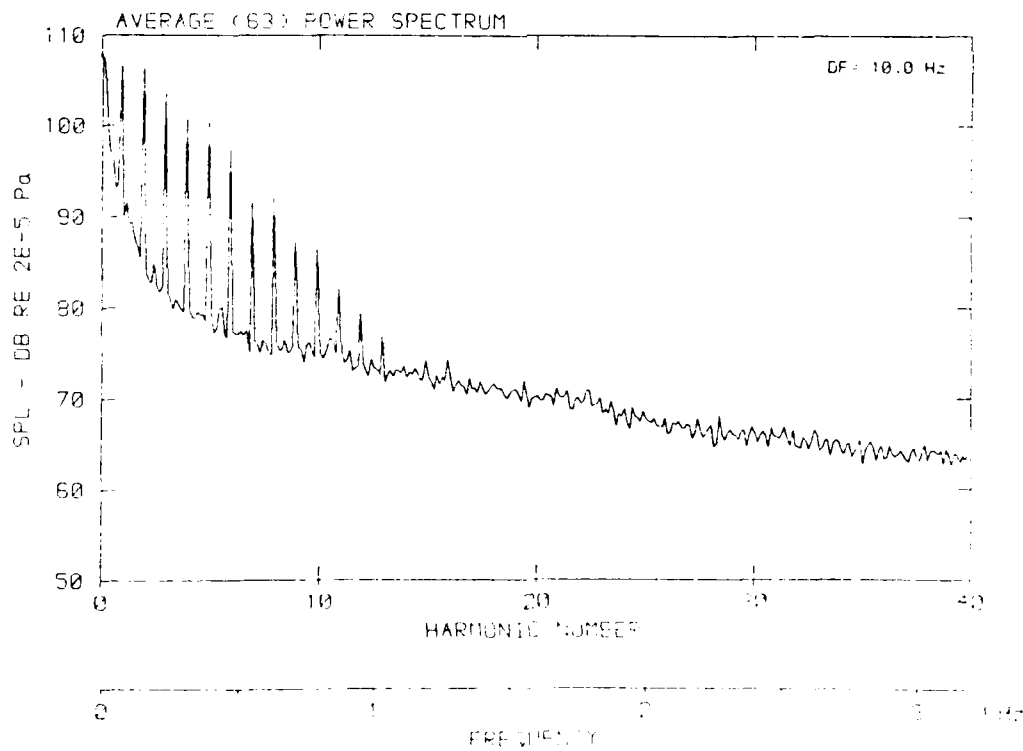
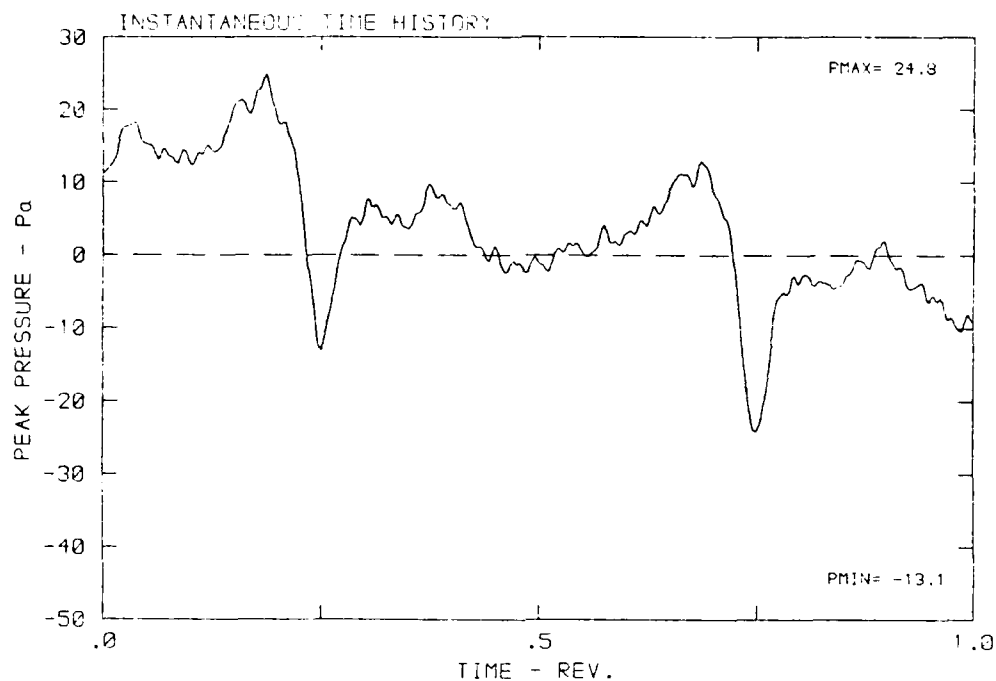
DATA POINT: GN-5 RUN: 1E3 ME: 2

β : 23.7° MH: .7755 n: 2400 rpm γ : .261 ϕ : -17.4° T: 209.0



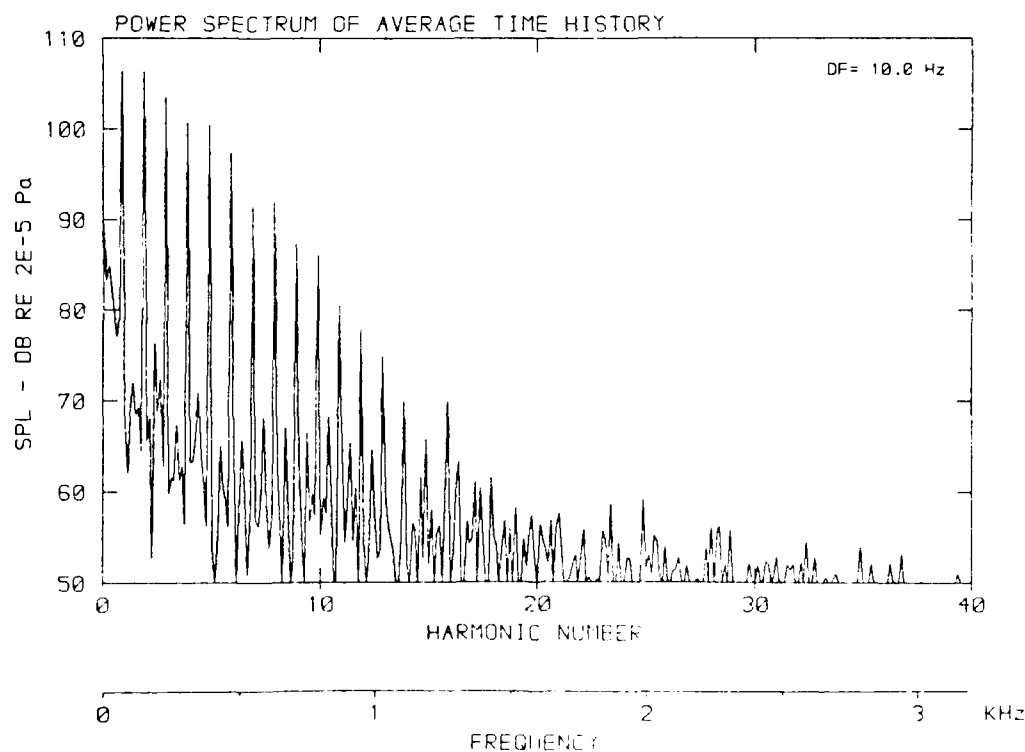
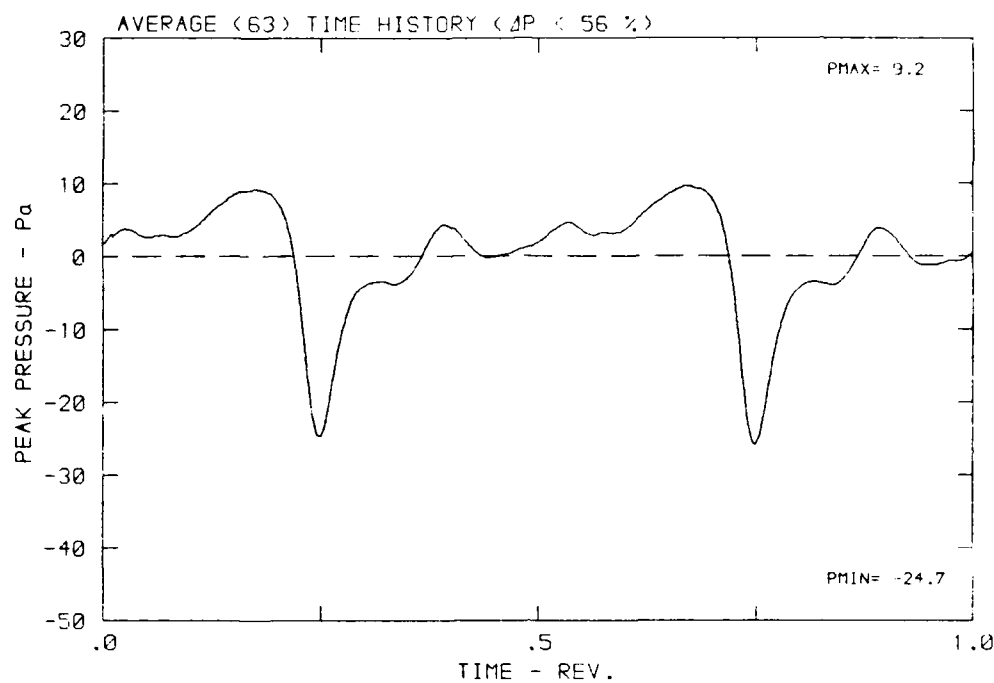
DATA POINT: GN-6 RUN: 150 MF: 3

β : 23.7° MH: .7755 n: 2400 rpm Vzu: .262 ϕ : -7.4° T: 289.2



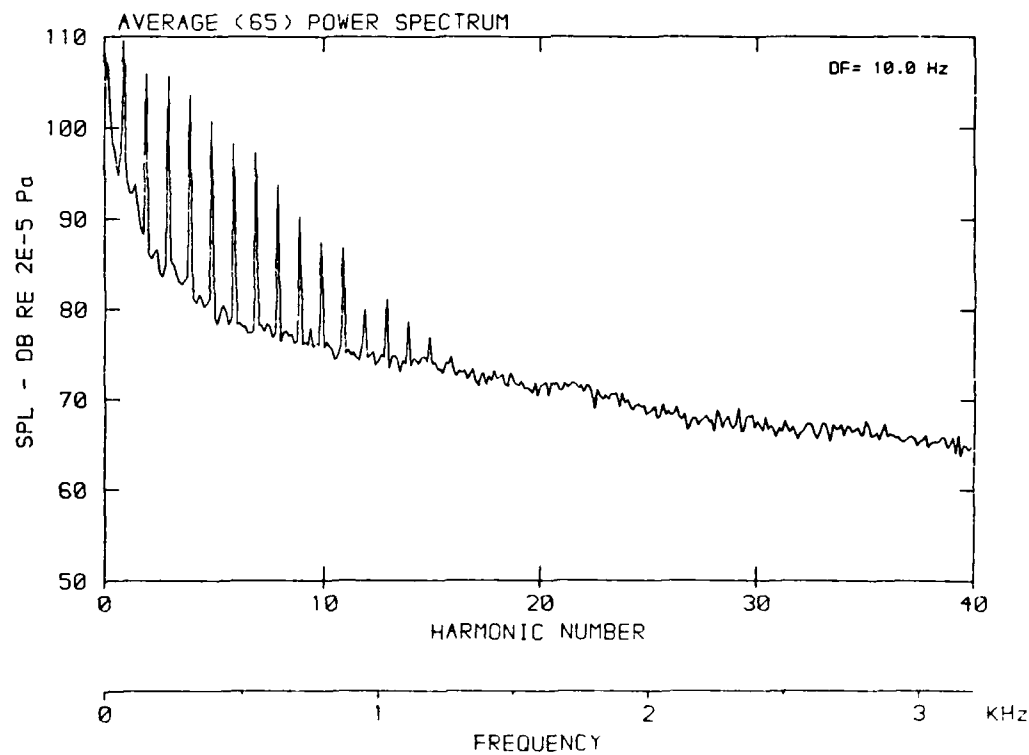
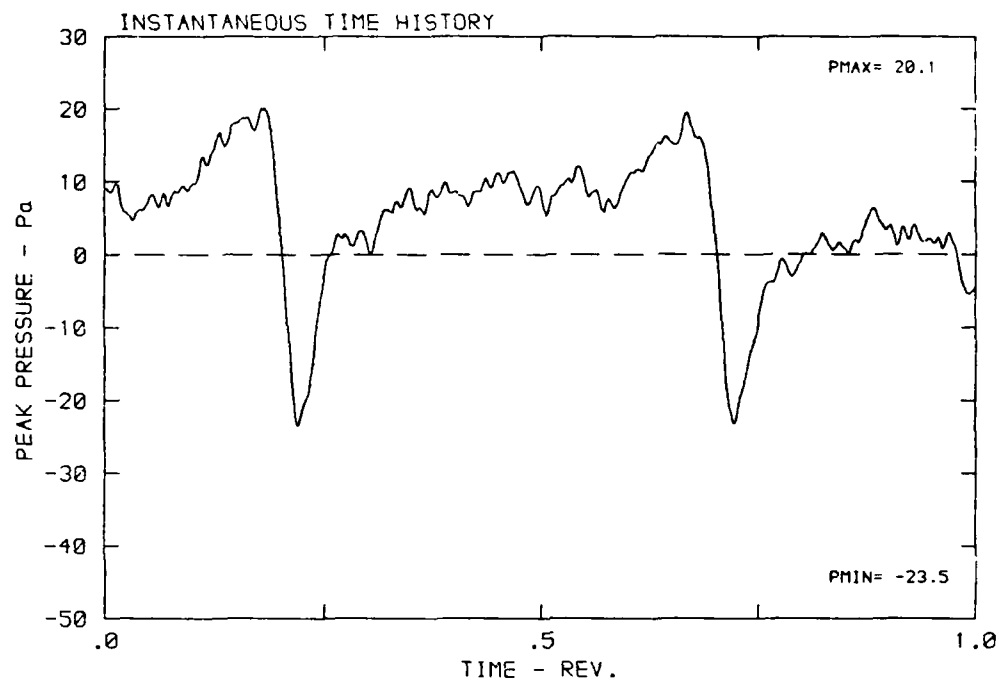
DATA POINT: GN-6 RUN: 150 MP: 3

β : 23.7° MH: .7755 n: 2400 rpm v/u : .262 ϕ : -7.4° T: 288.2 K



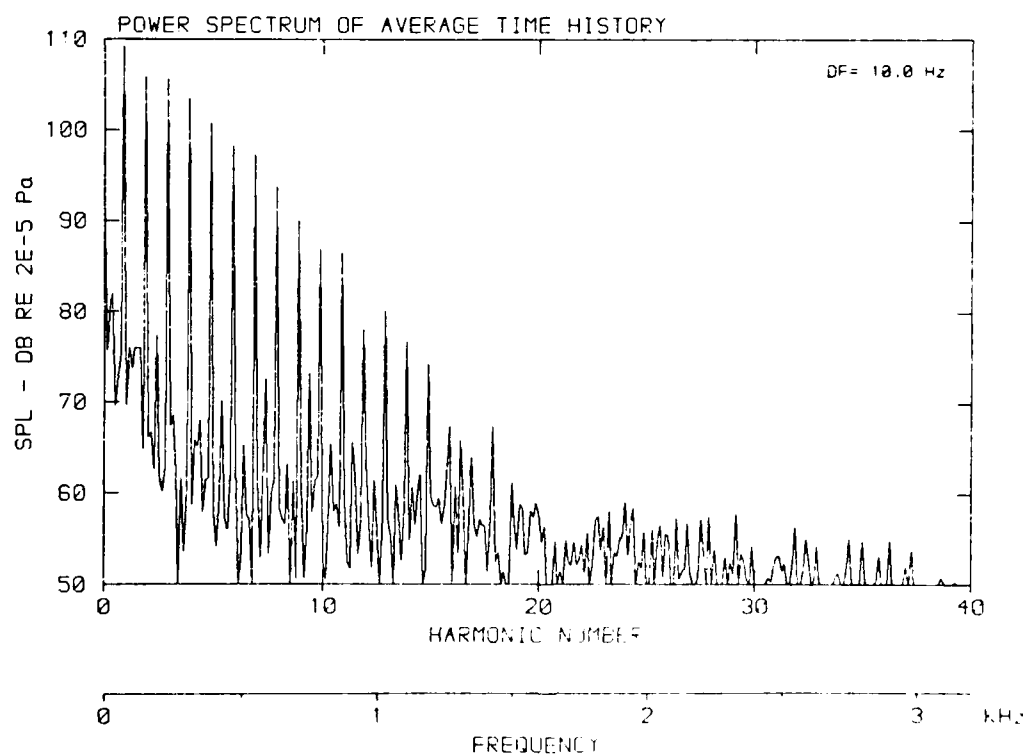
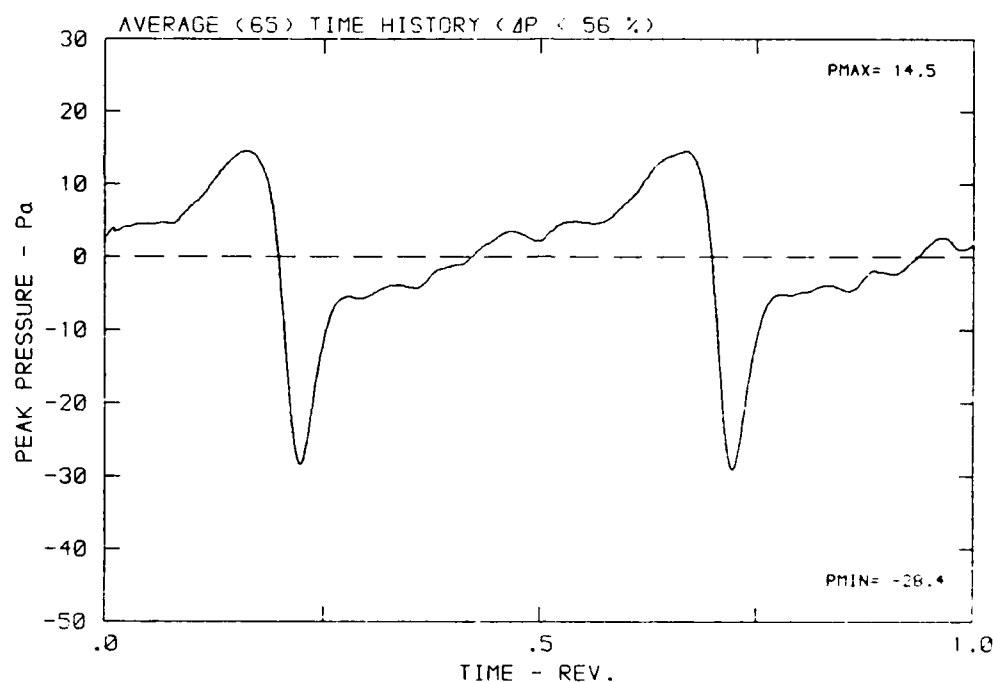
DATA POINT: GN-6 RUN: 150 MP: 4

β : 23.7° MH: .7755 n: 2400 rpm v/u: .262 ϕ : -7.4° T: 283.2 K



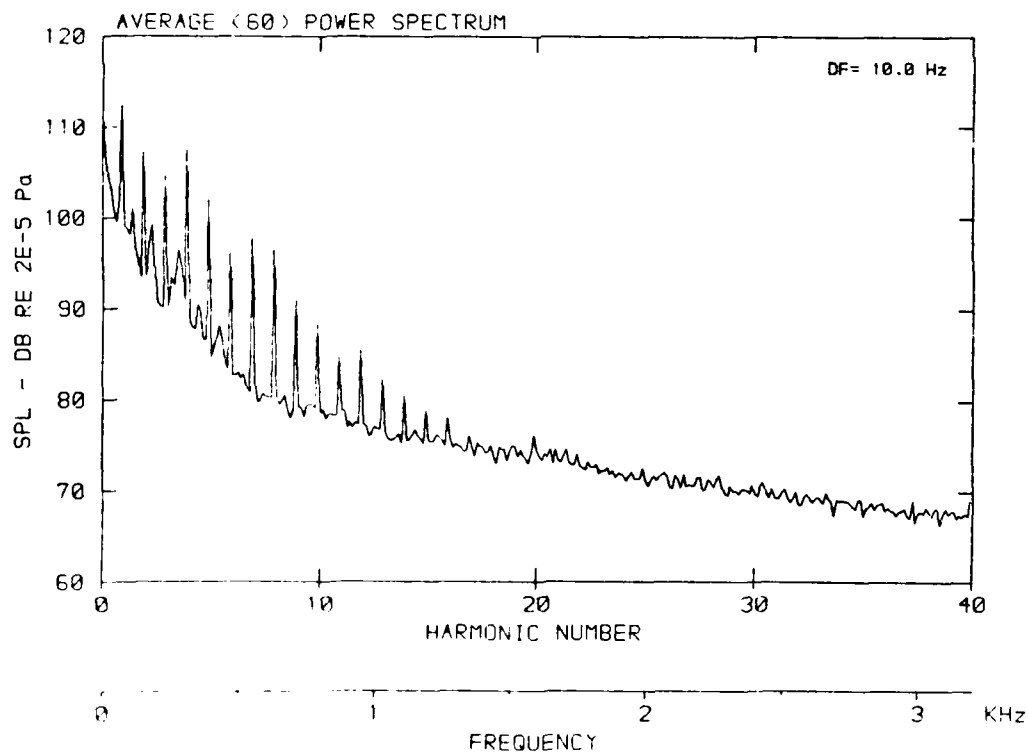
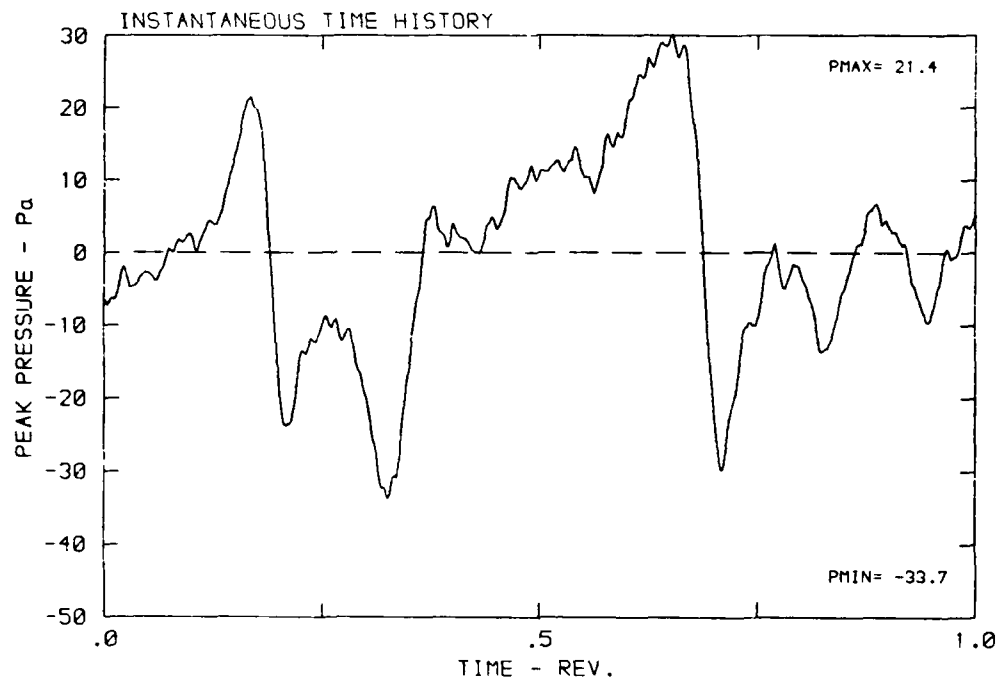
DATA POINT: GN-6 RUN: 150 MP: 4

β : 23.7° MH: .7755 n: 2400 rpm v/u : .262 ϕ : -7.4° T: 288.2 K



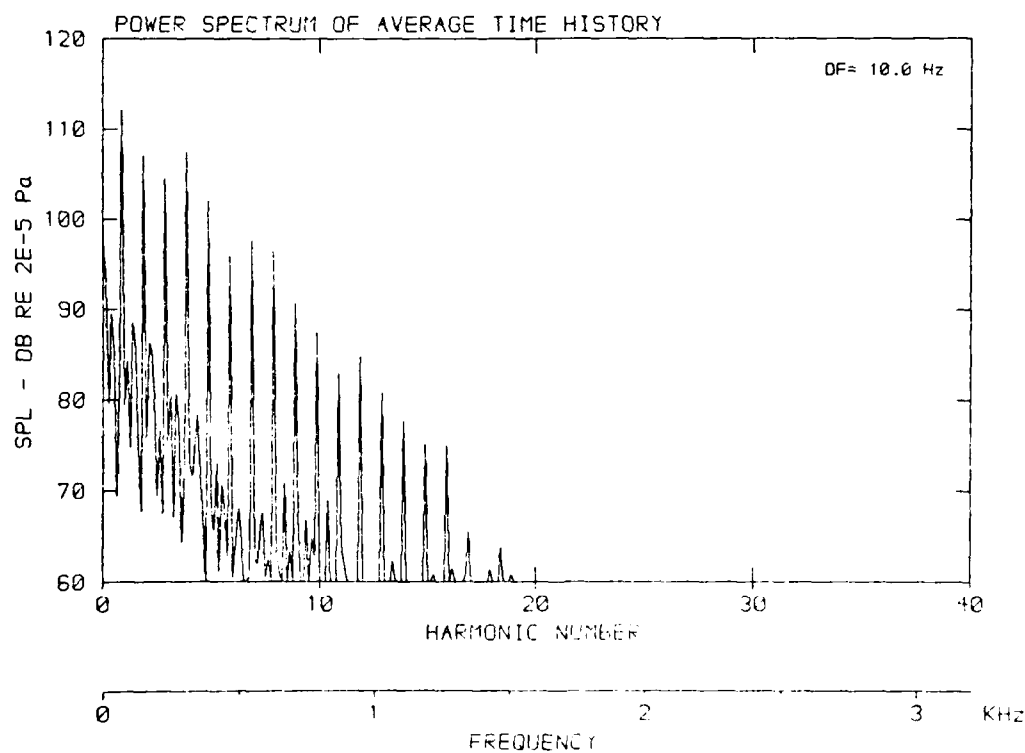
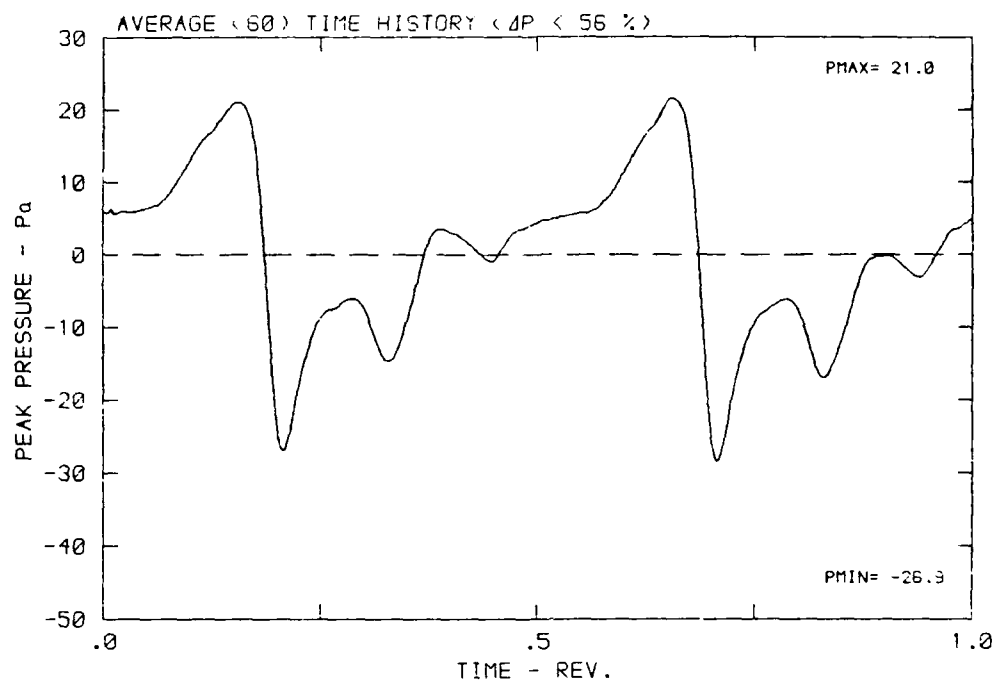
DATA POINT: GN-6 RUN: 150 MP: 5

β : 23.7° MH: .7755 n: 2400 rpm v/u : .262 ϕ : -7.4° T: 288.2 K



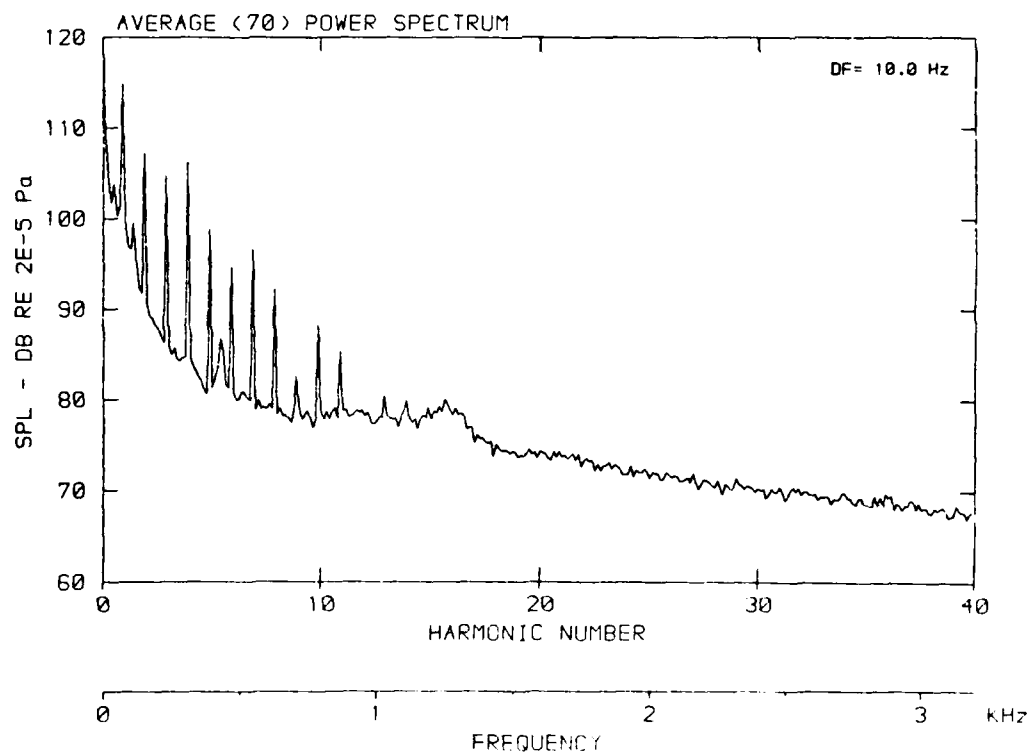
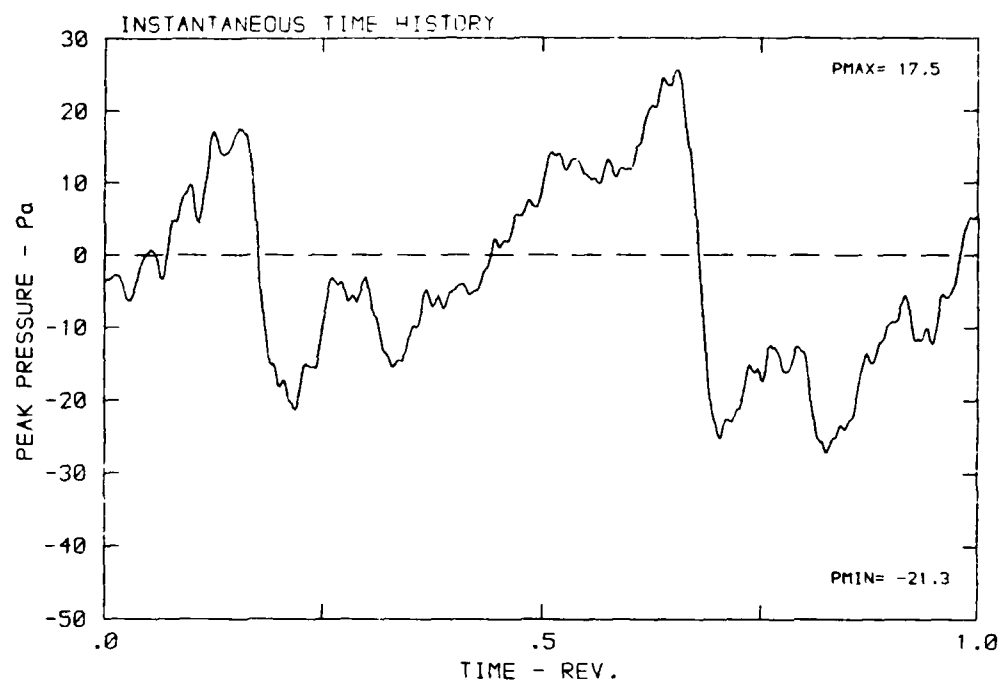
DATA POINT: GN-6 RUN: 150 MP: 5

β : 23.7° MH: .7755 n: 2400 rpm v/u: .262 ϕ : -7.4° T: 288.2 K



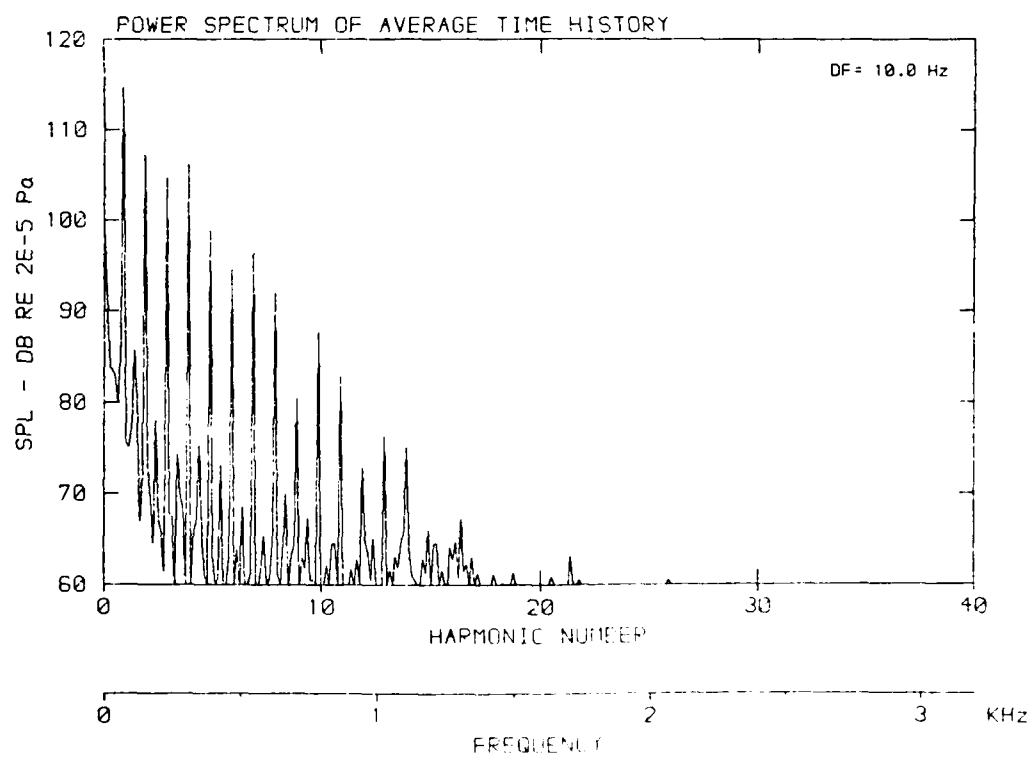
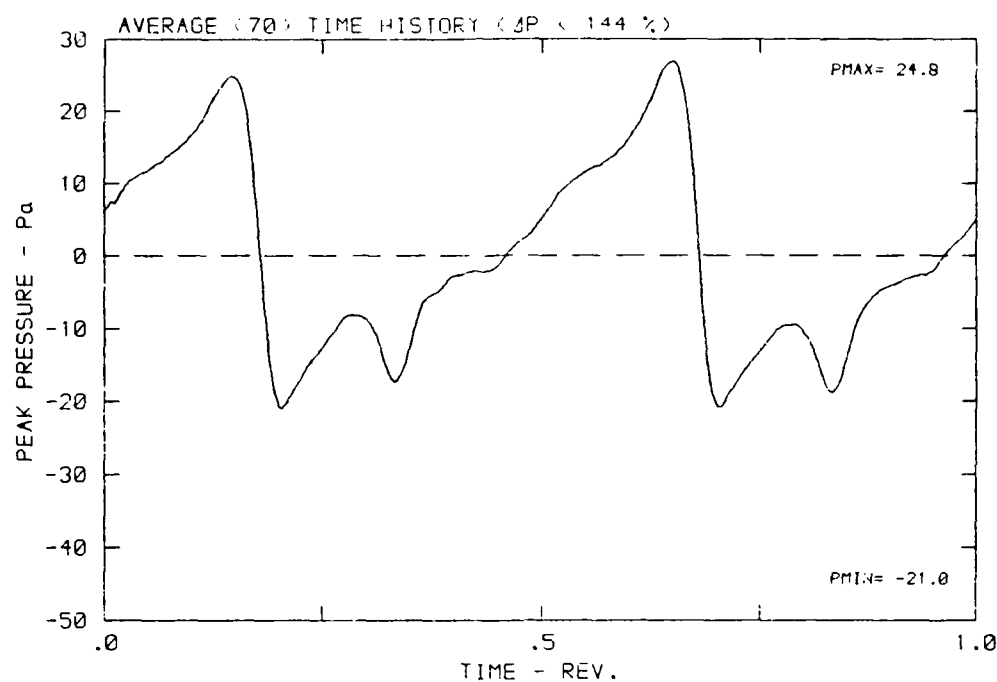
DATA POINT: GN-5 RUN: 150 MP: 6

β : 23.7° MH: .7755 n: 2400 rpm v/u: .262 ϕ : -7.4° T: 288.2 K



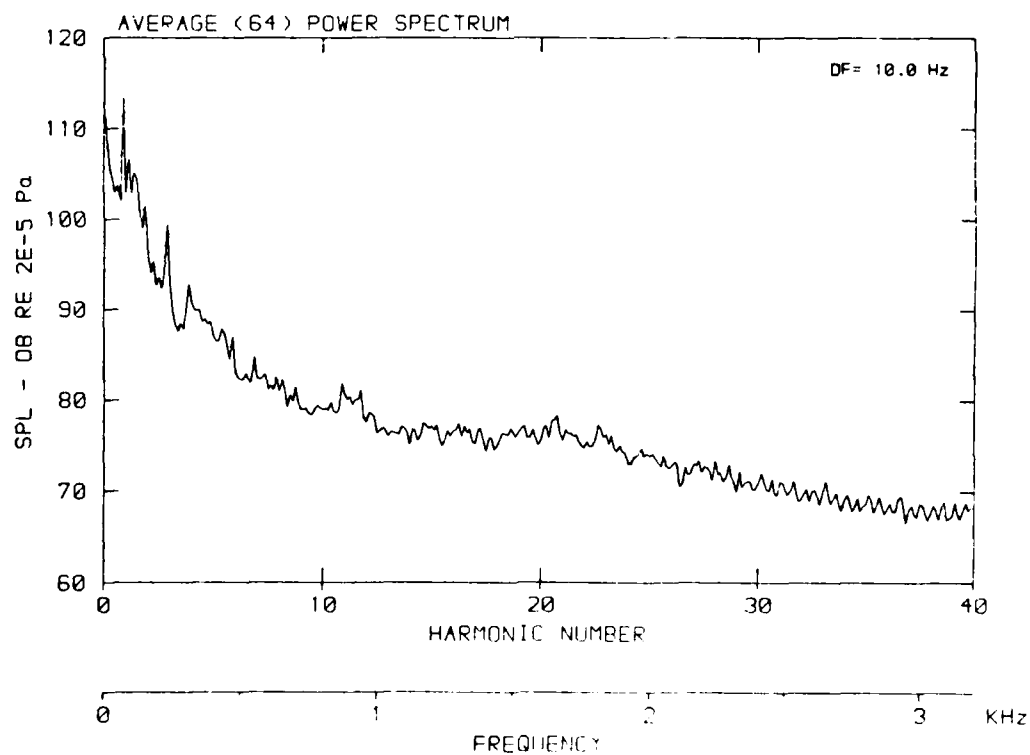
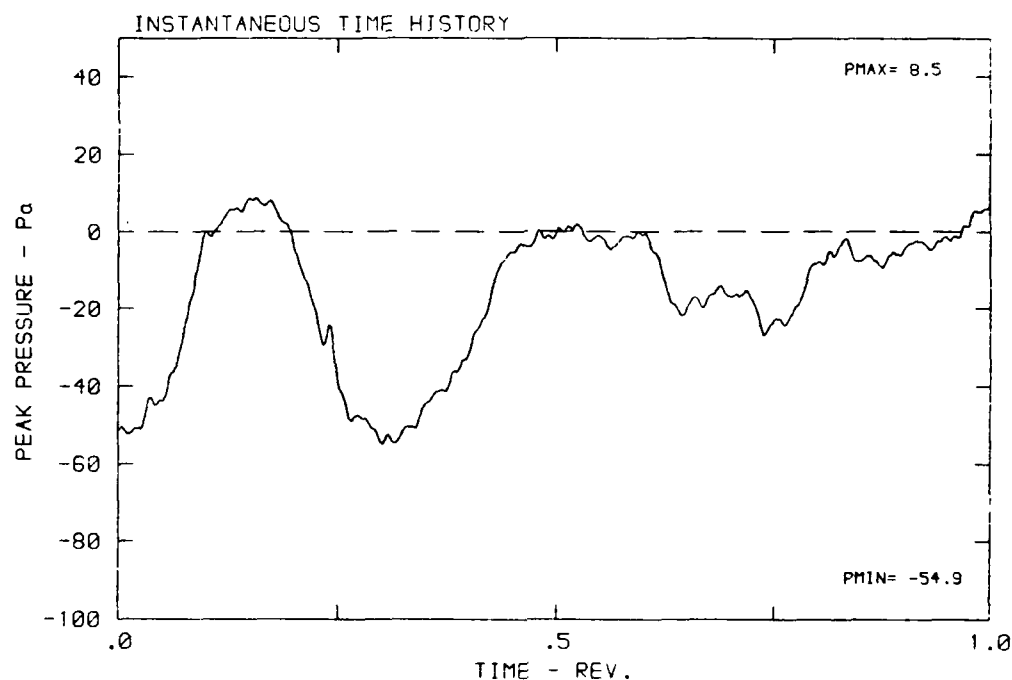
DATA POINT: GN-6 RUN: 150 MP: 6

β : 23.7° MH: .7755 n: 2400 rpm v/u : .262 ϕ : -7.4° T: 289.2 K



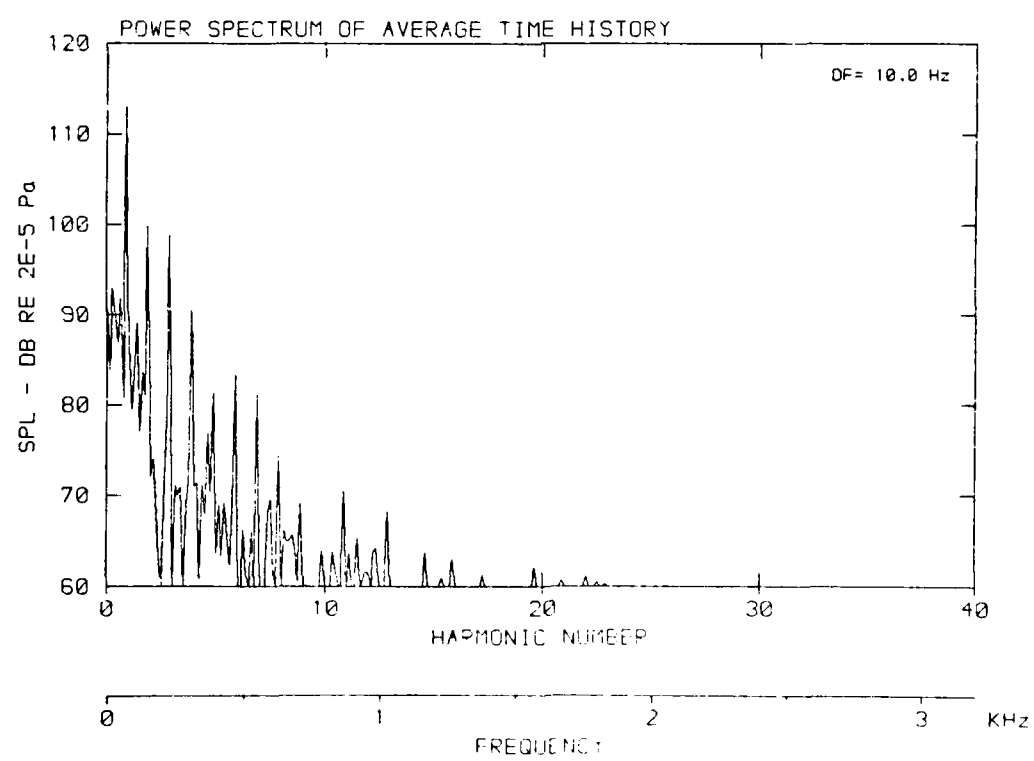
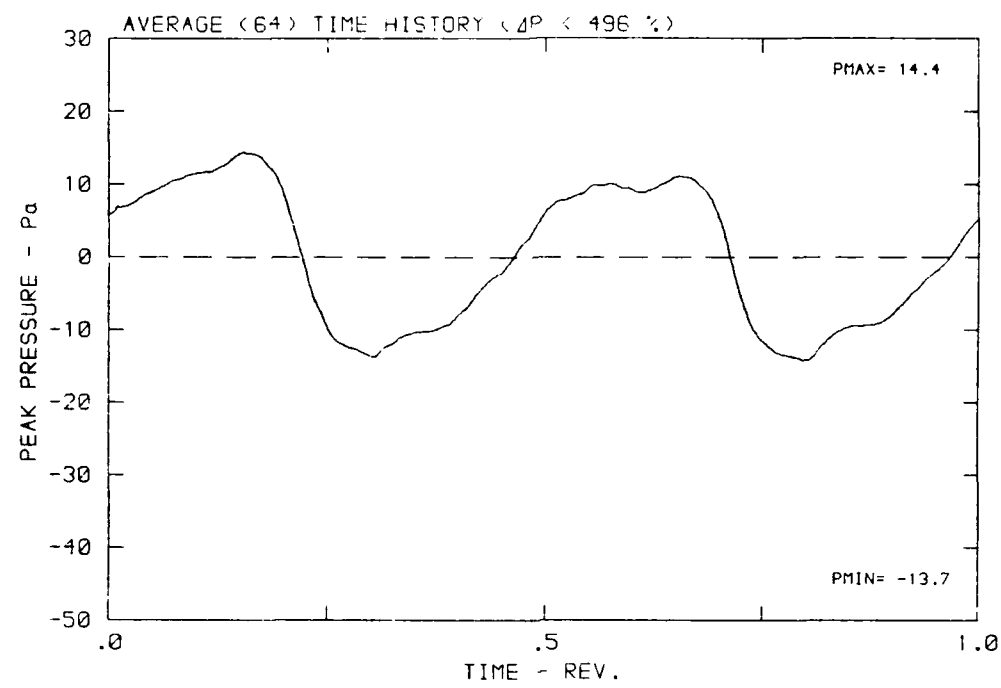
DATA POINT: GN-6 RUN: 150 MP: 7

β : 23.7° MH: .7755 n: 2400 rpm v/u : .262 ϕ : -7.4° T: 288.2 K



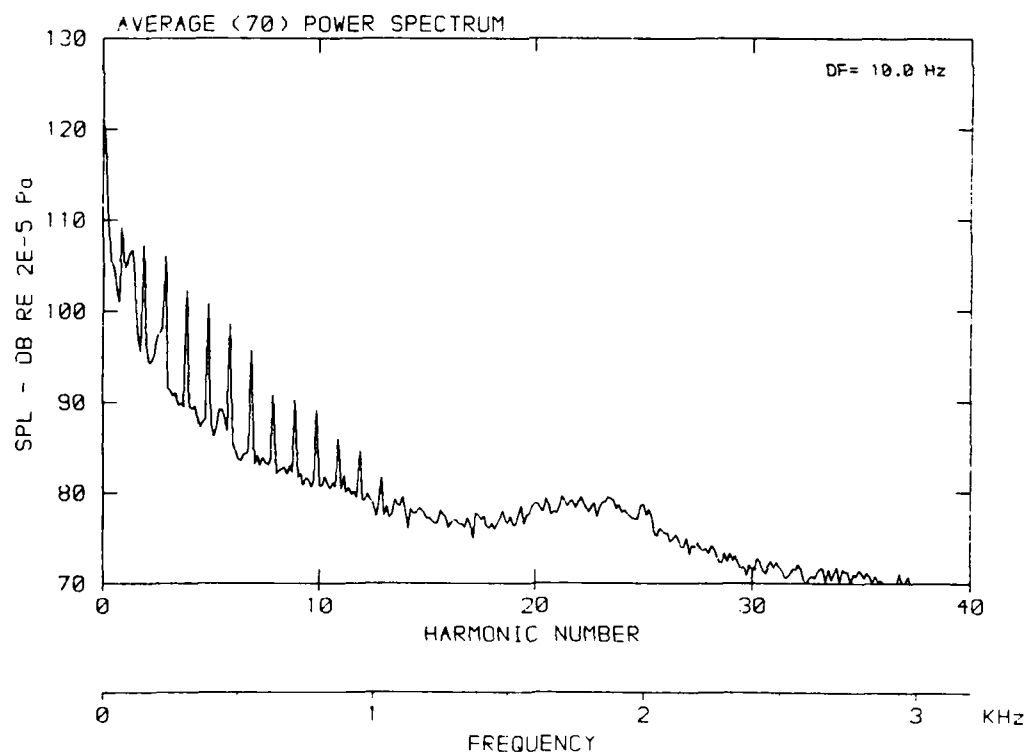
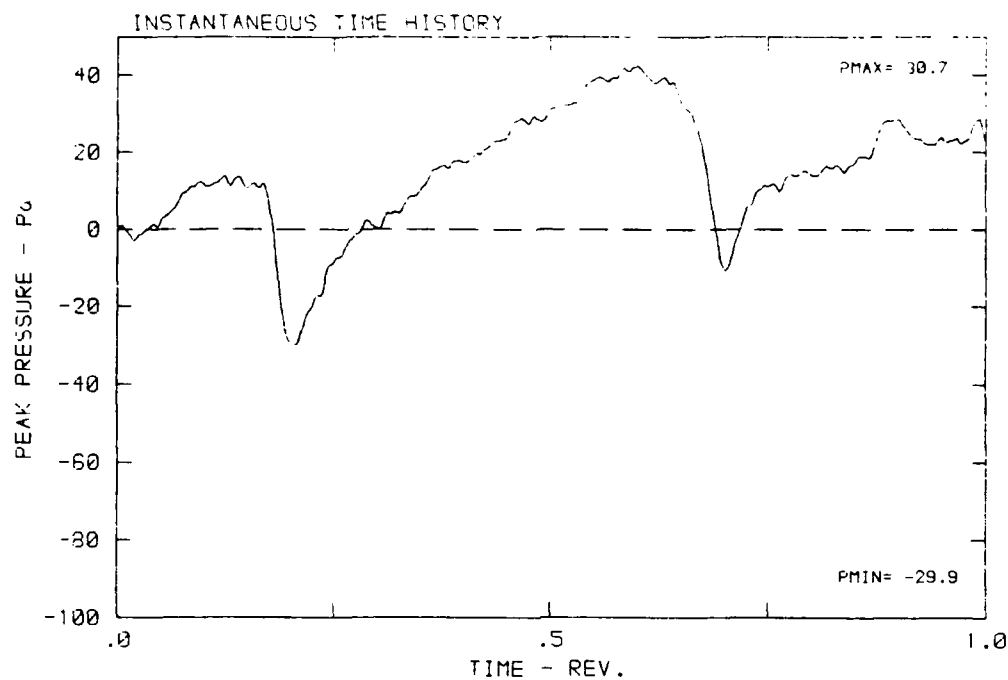
DATA POINT: GN-6 RUN: 150 MP: 7

β : 23.7° MH: .7755 n: 2400 rpm v/u : .262 ϕ : -7.4° T: 288.2 K



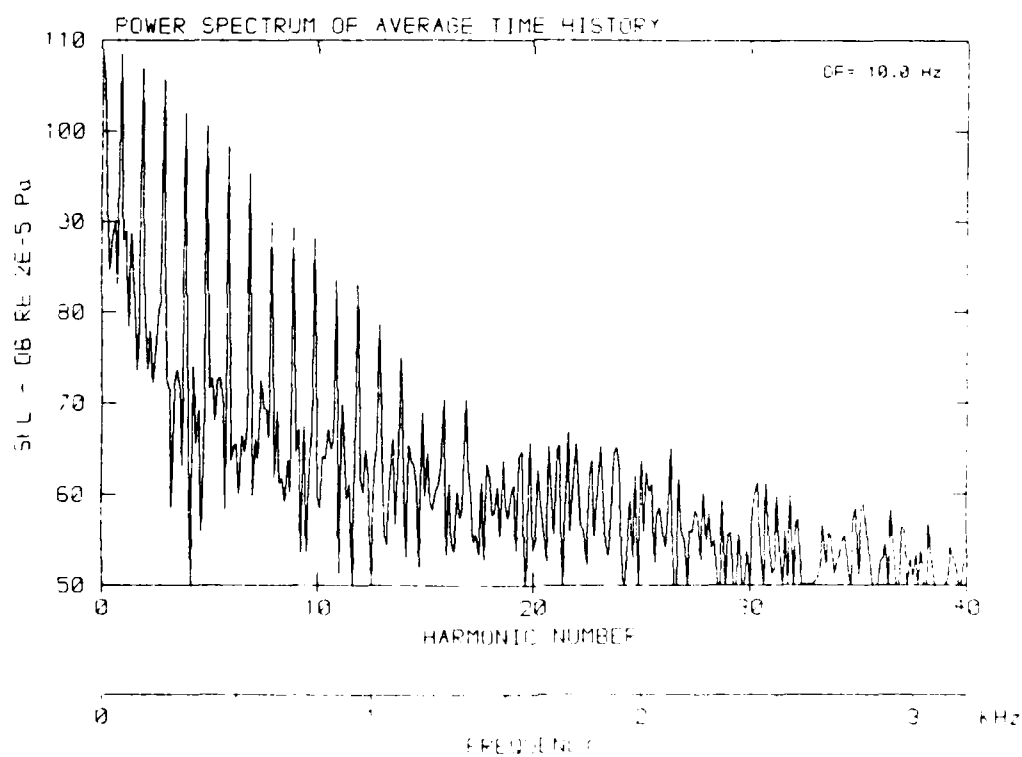
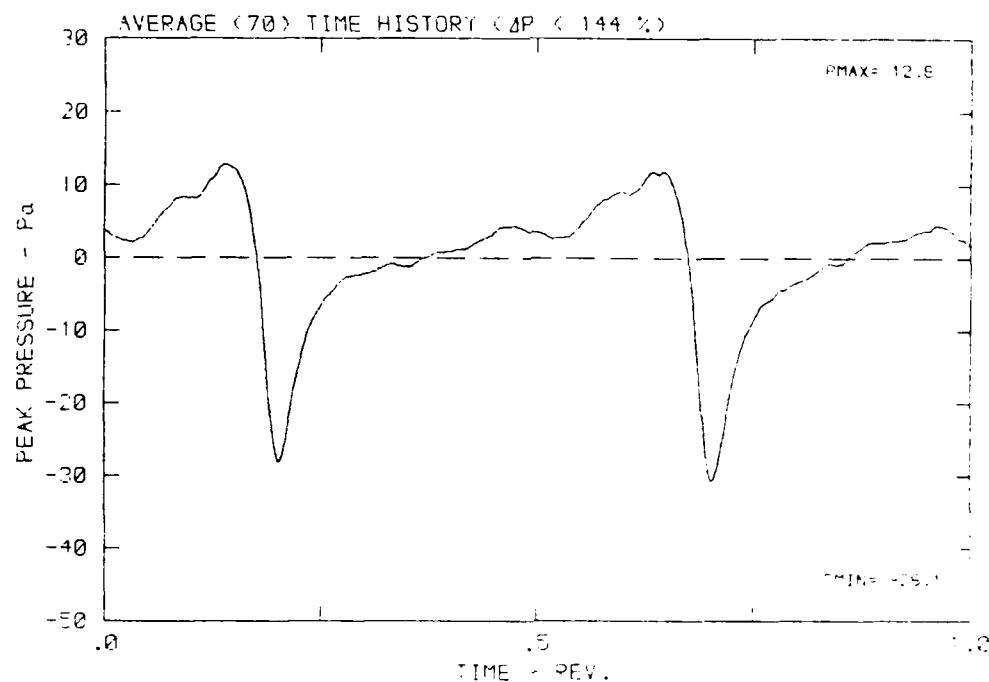
DATA POINT: GN-5 RUN: 150 MP: E

β : 23.7° MH: .7755 n: 2400 rpm ν_{cu} : .262 ϕ : -7.4° T: 288.2 K



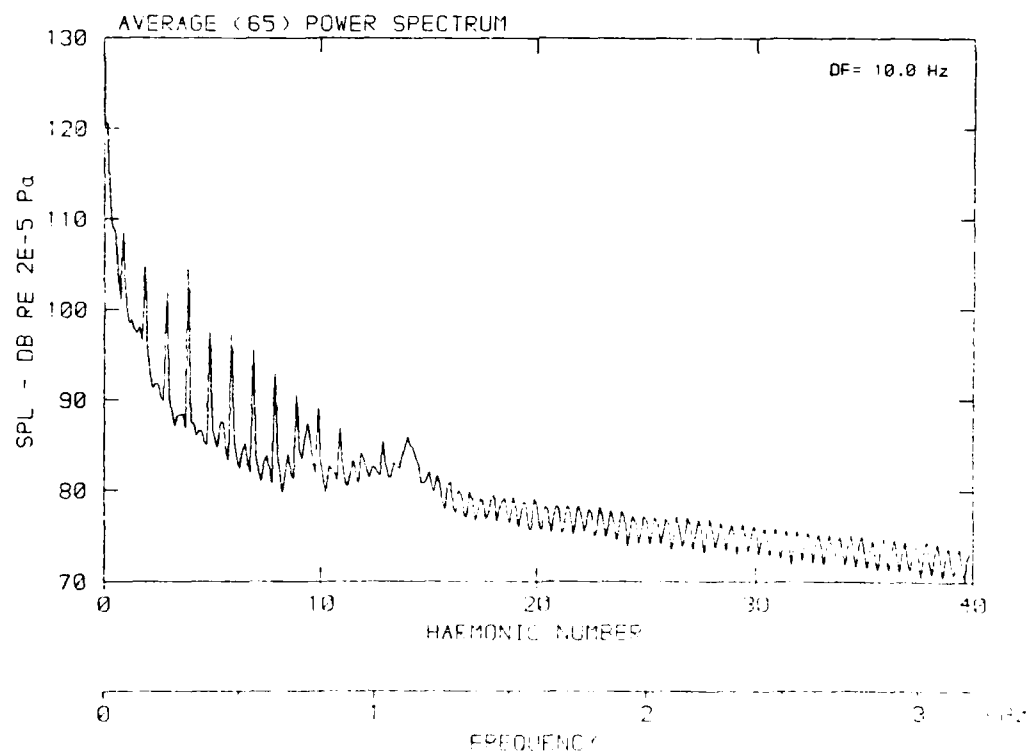
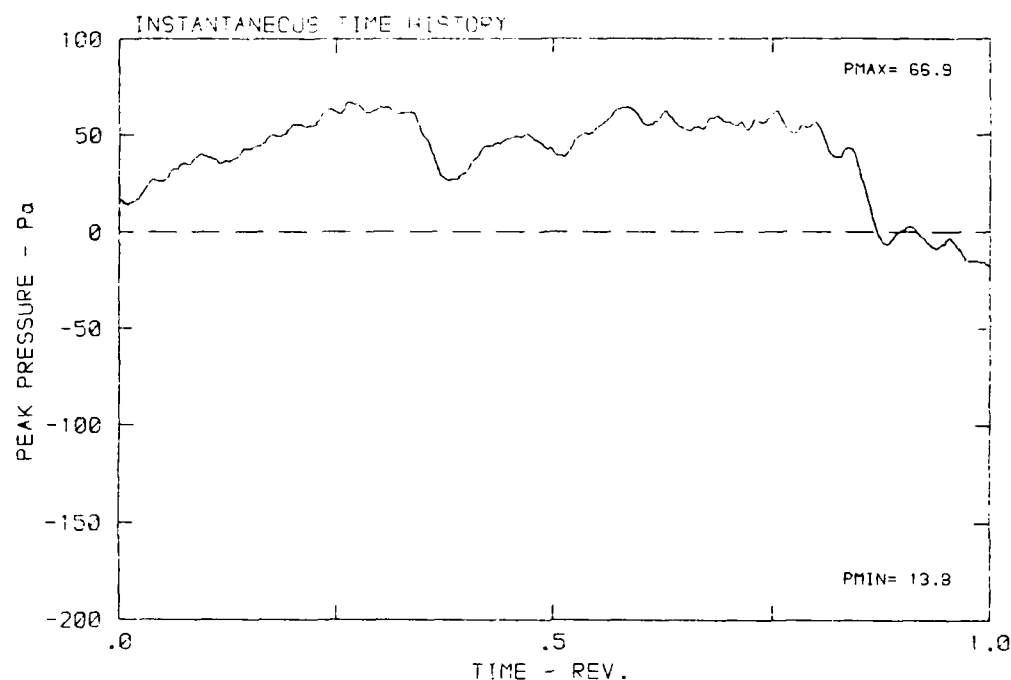
DATA POINT: GN-6 RUN: 150 MP: 8

β : 23.7° MH: .7755 n: 2400 rpm v/u : .262 ϕ : -7.4° T: 288.2 K



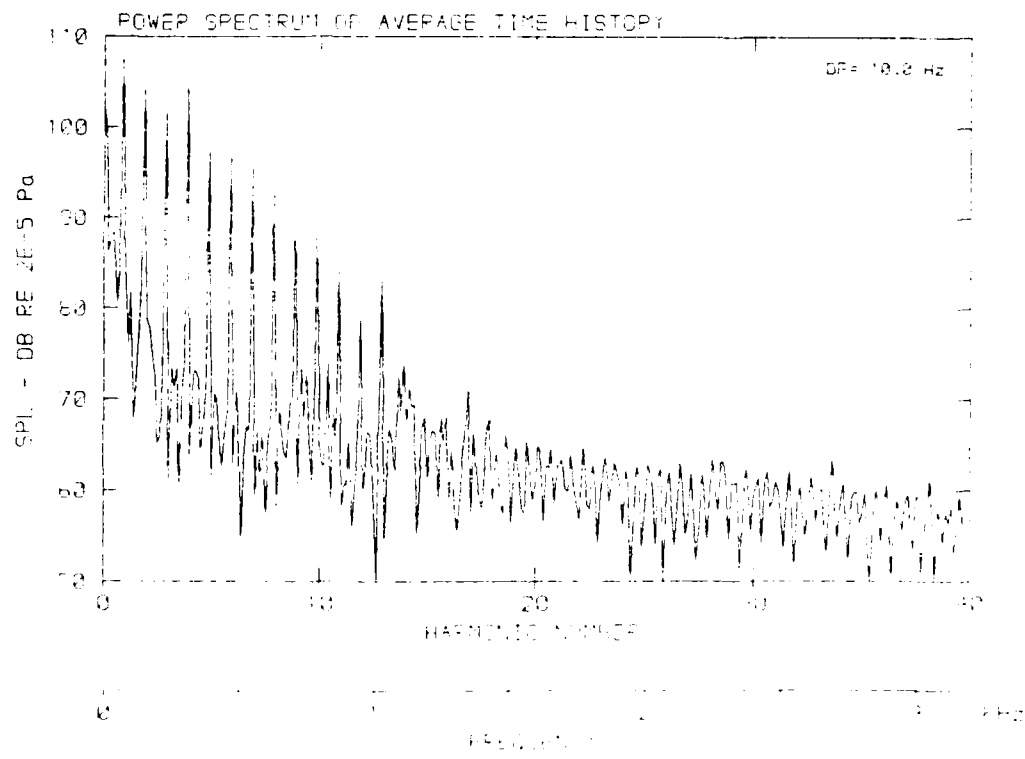
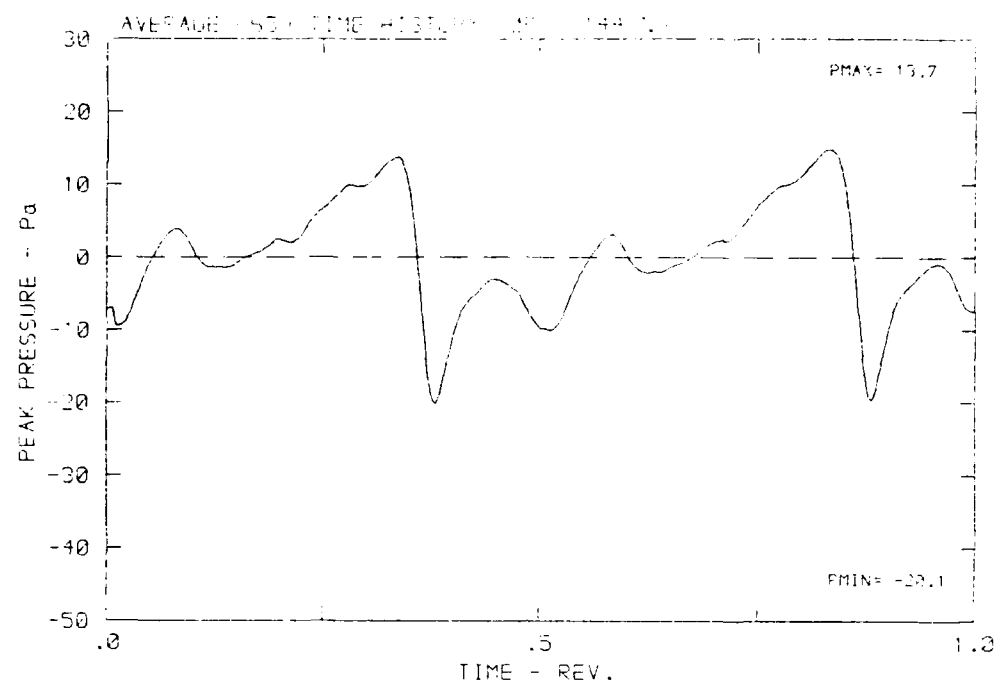
DATA POINT: GN-5 RUN: 150 ME: E

β : 23.7° η : .7755 n : 2400 rpm μ : .262 ϕ : -7.4° T : 230.2



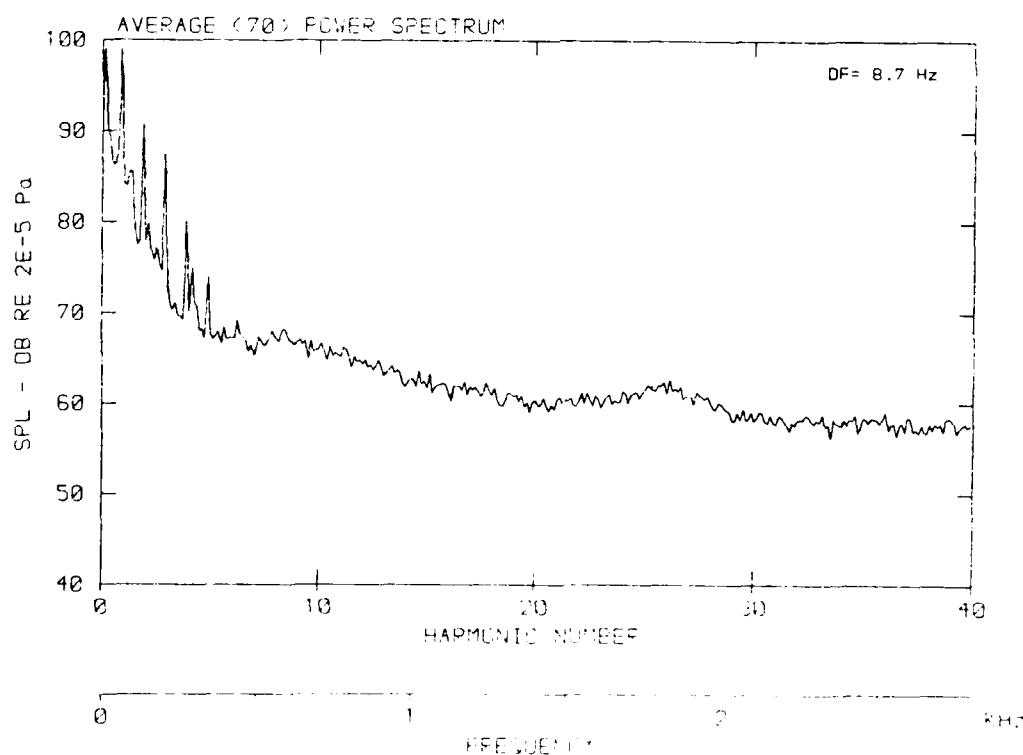
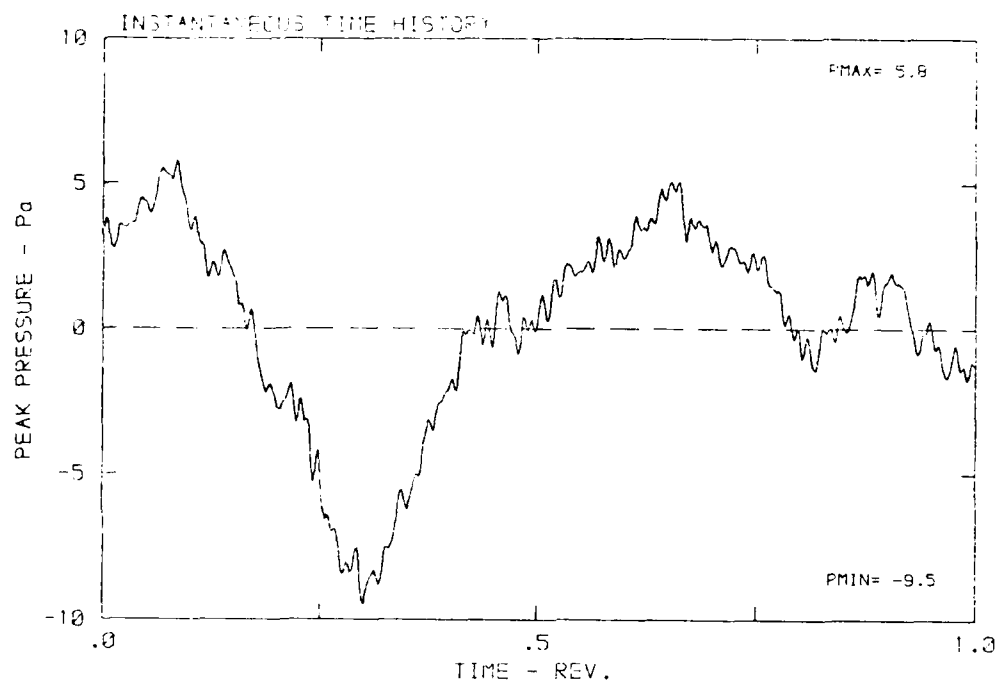
DATA POINT: 511-E 1 144.1

β : 23.7° NH: .7755 n: 24.00 μ : .0282 ϕ : -7.4° τ : .0810



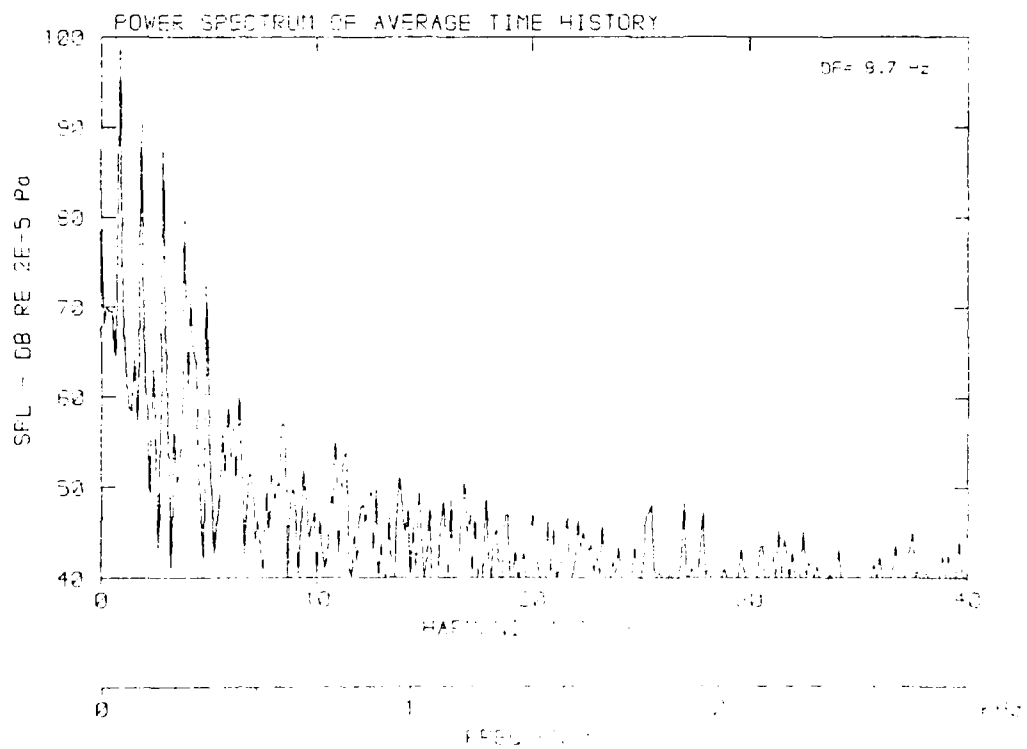
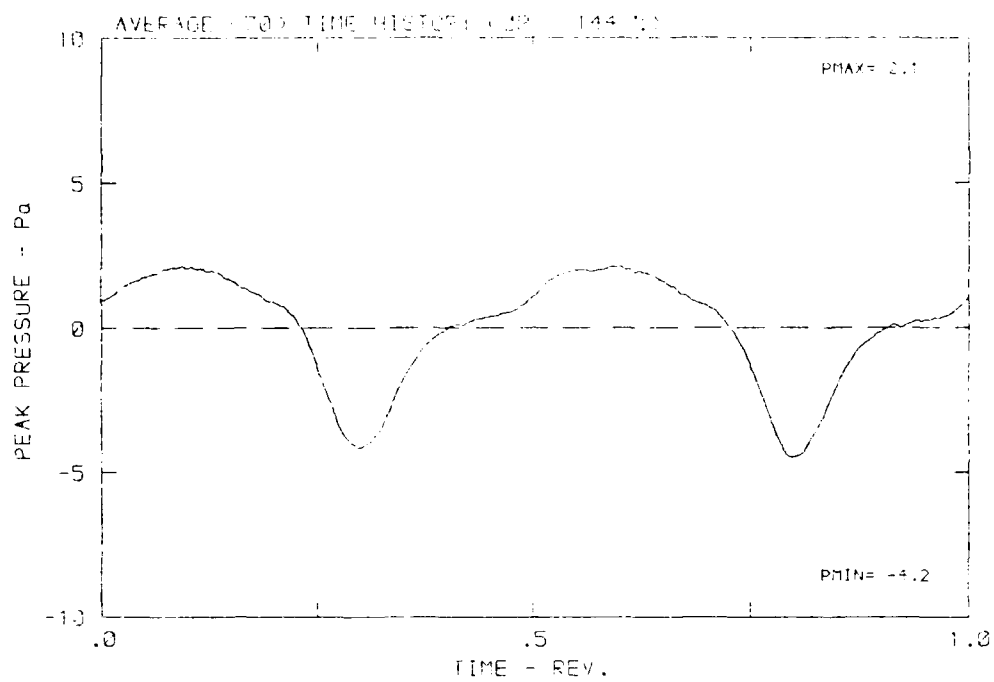
DATA POINT: 11 RUN: 15-1981

β : 19.9° θ : 187.4° α : 0.00 ϕ : 1.31 ψ : -3.0° γ : 278.8°



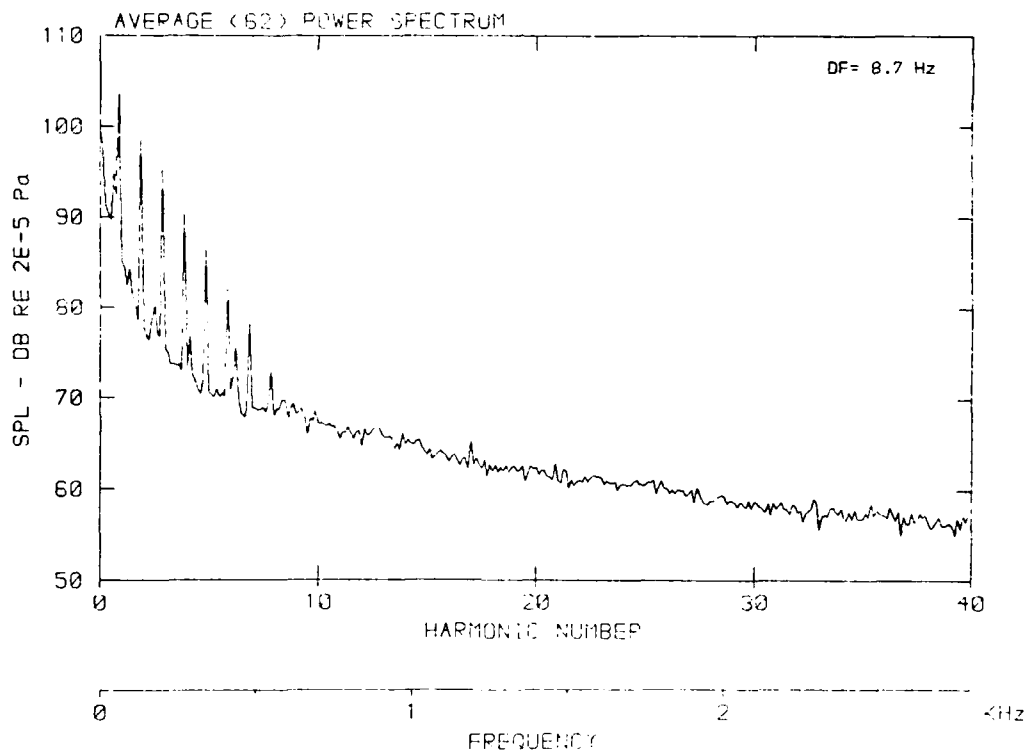
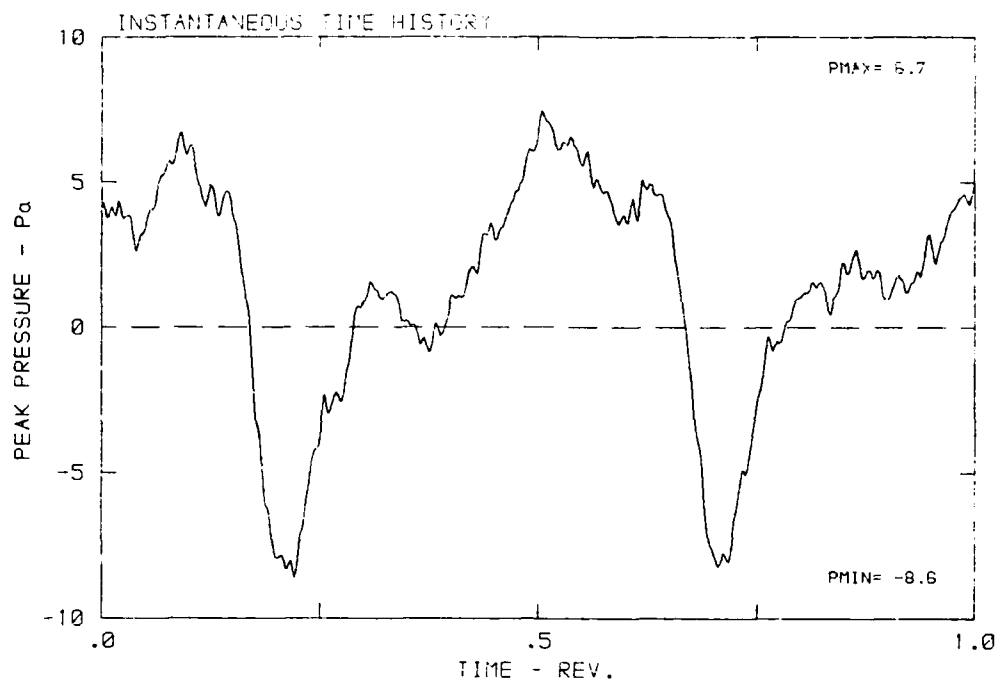
DATA POINT: 10-1 07 N: 154 ME

β : 19.9° MH: .6734 N: 2100 rpm U: .01 .231 p: -3.3° T: 268.5



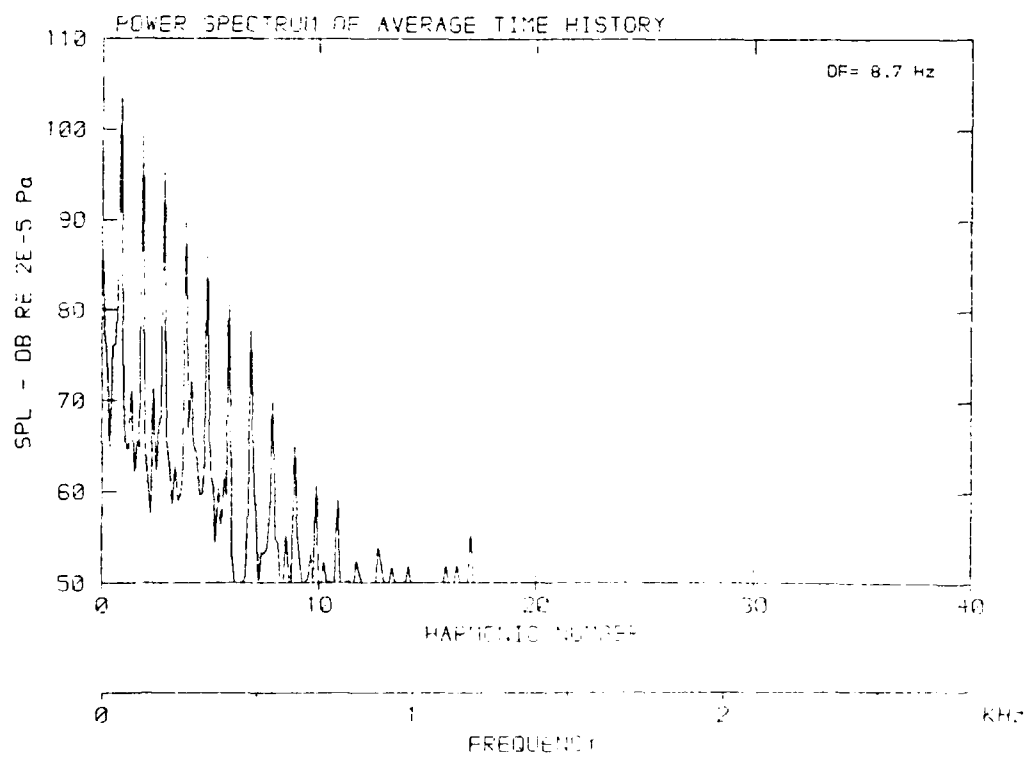
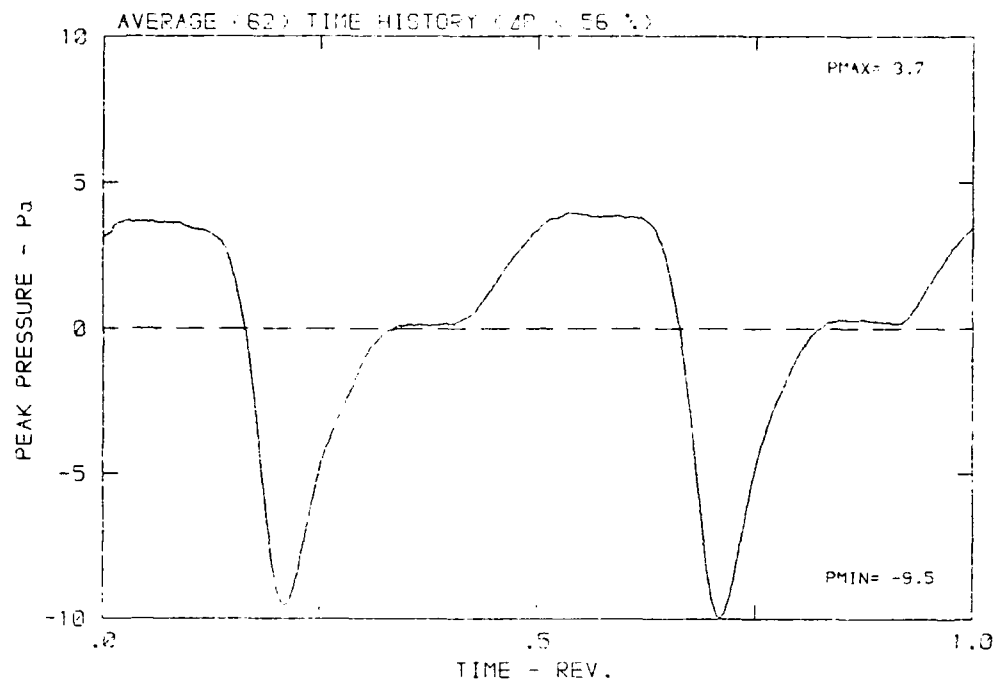
DATA POINT: LN-11 15001 754 754 754

β : 19.8° α : .6704 ϕ : 211.0 rpm ψ : .137° θ : -3.1° τ : 253.5 A



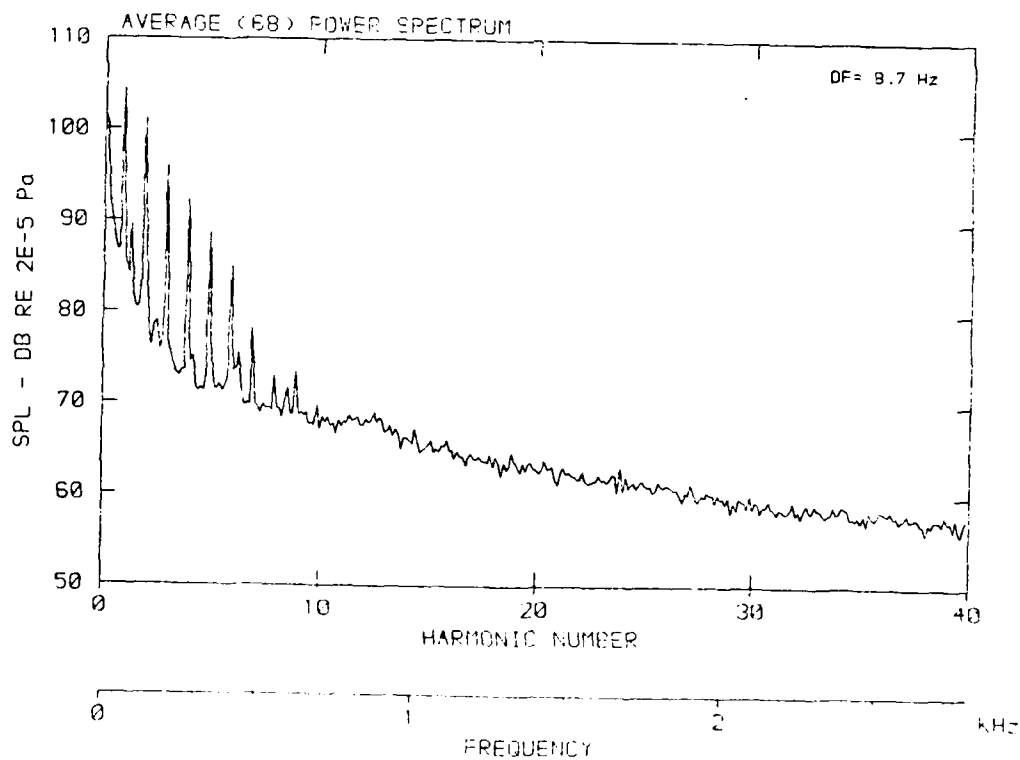
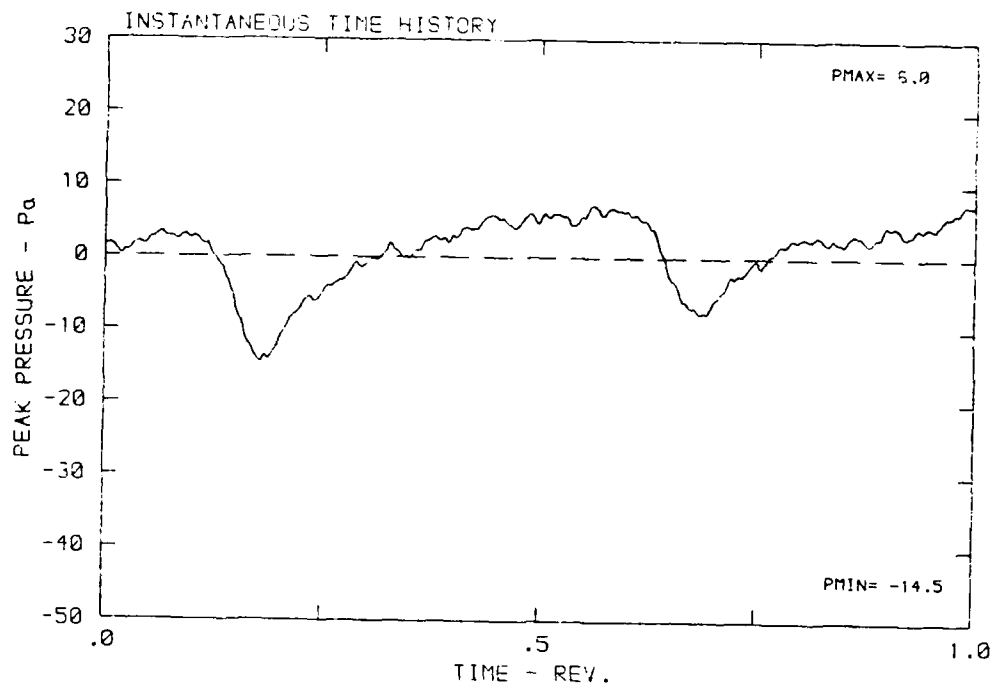
DATA POINT: LN-1 RUN: 154 NF: 1

β : 19.9° MH: .6734 n: 2100 rpm λ : .231 ϕ : -3.6° T : 258.5 s



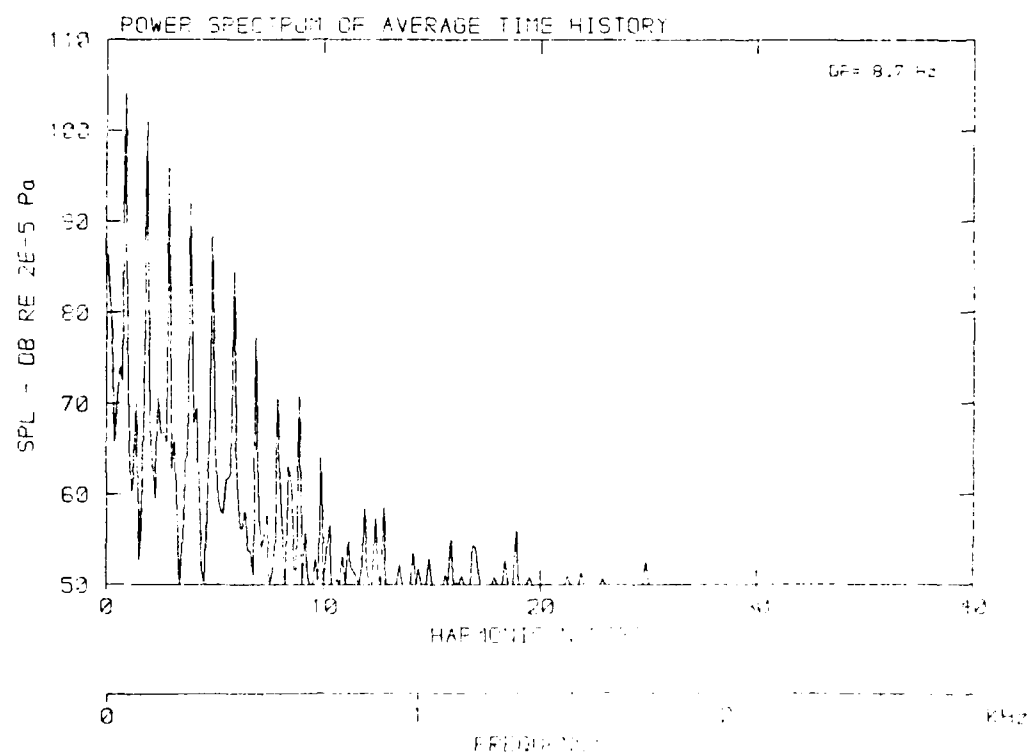
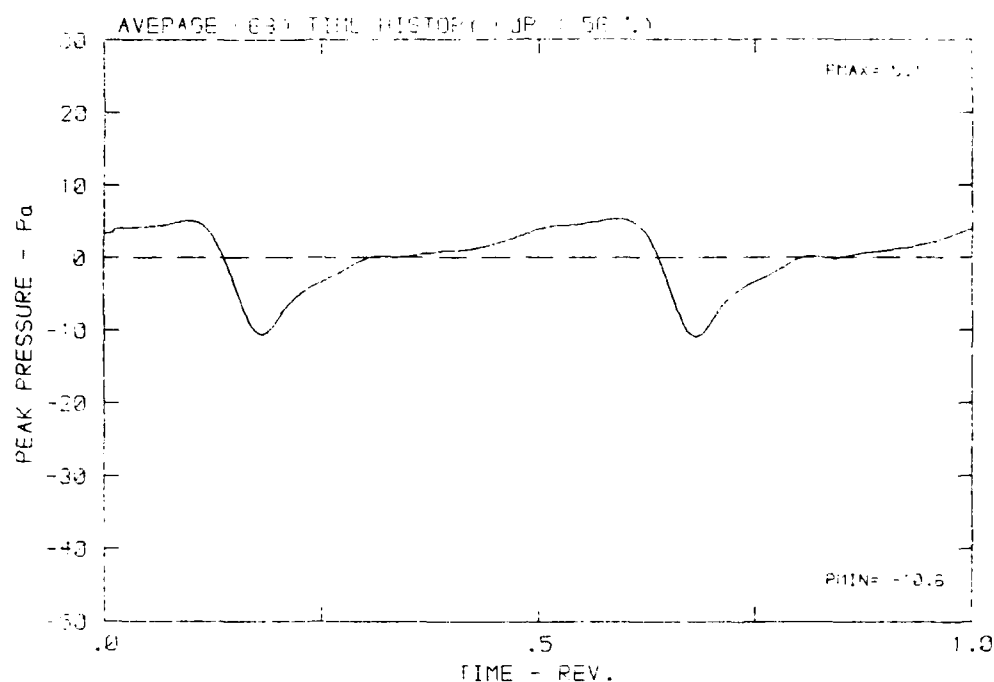
DATA POINT: LN-1 RUN: 154 MP: 3

β : 19.9° MH: .6734 n: 2100 rpm vru: .131 ϕ : -3.9° T: 298.5



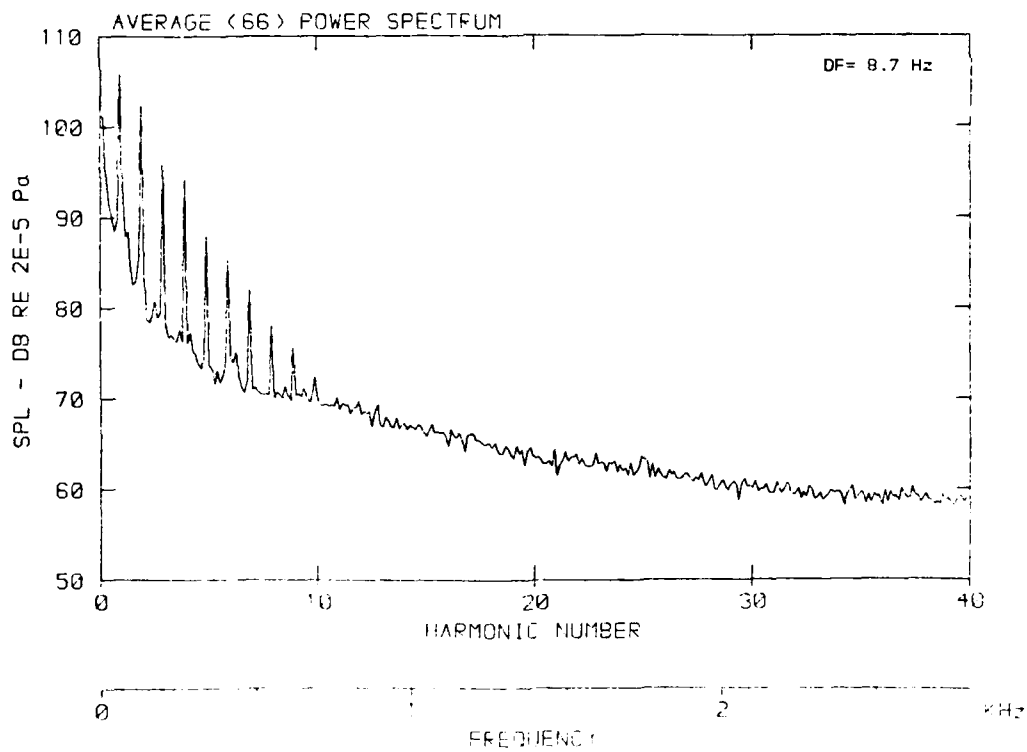
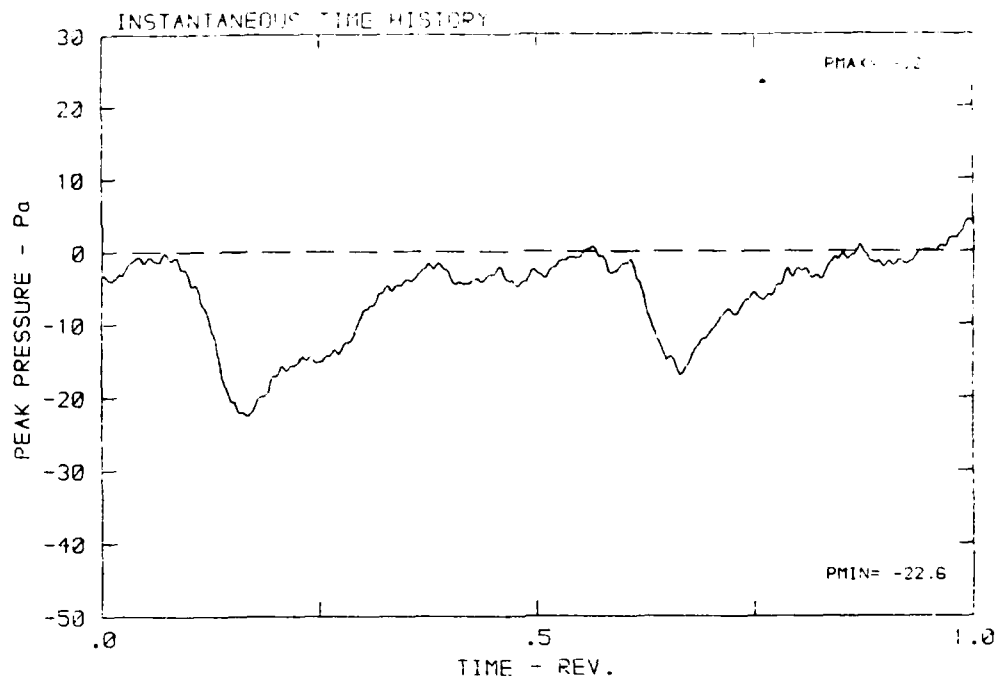
DATA POINTS: LN-1 RUN: 154 REP: 1

β : 19.3° MH: .8724 n: 2100 rpm VCU: .231 ϕ : -3.6° τ : 231.0



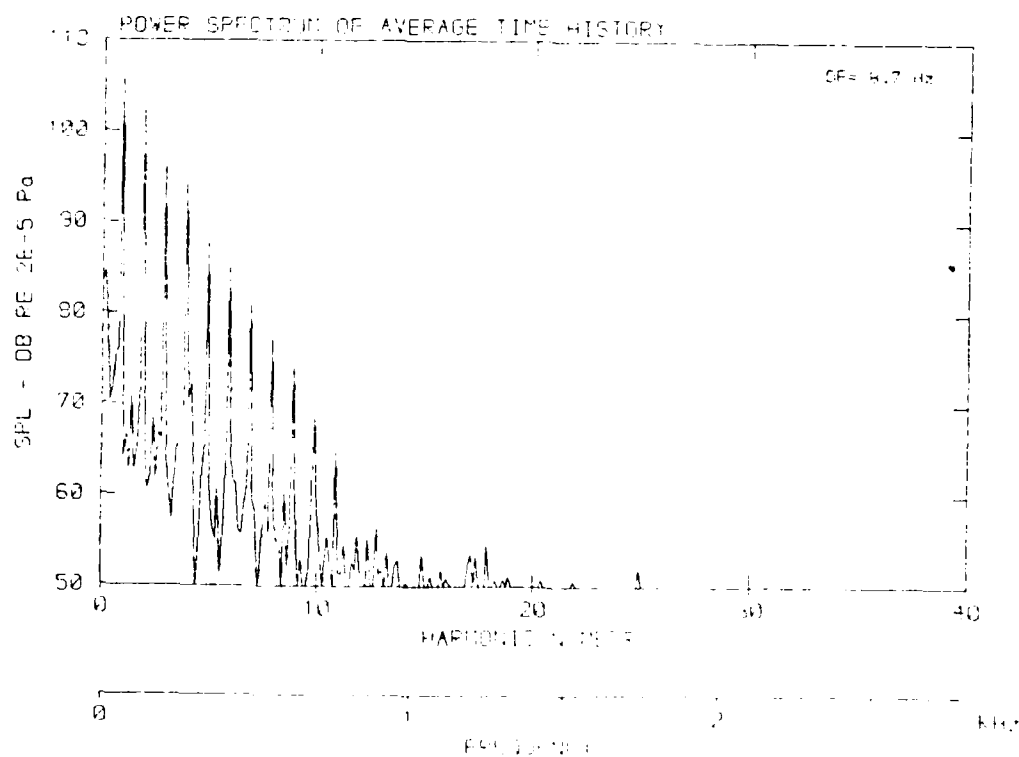
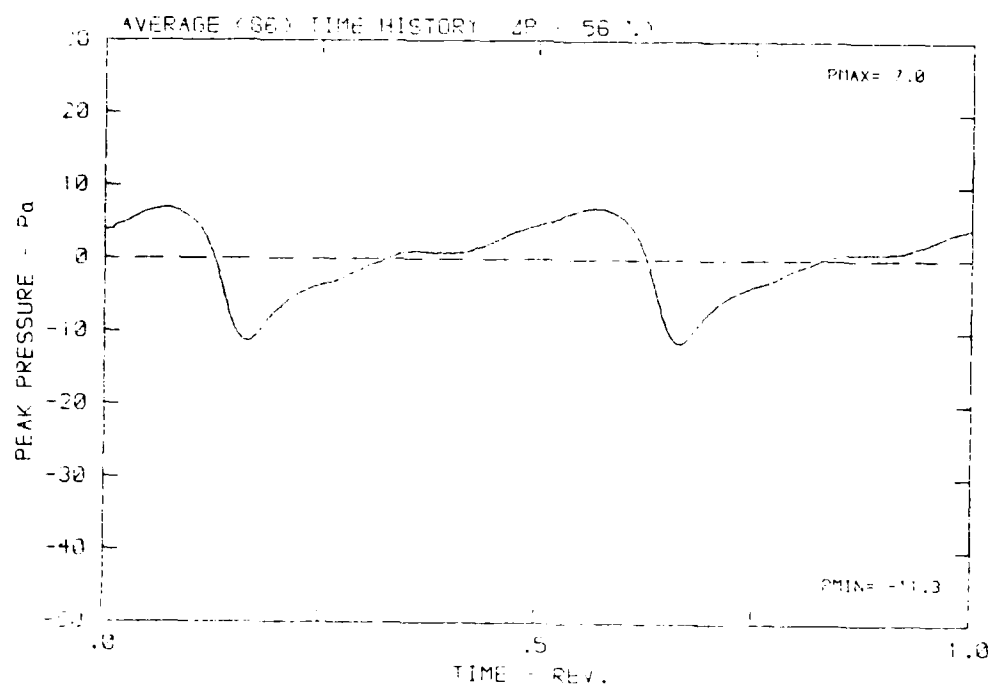
DATA POINT: 19.90 104: .6734 104: 2100 104: 1.01 104: 1.01 104: 1.01

104: 19.90 104: .6734 104: 2100 104: 1.01 104: 1.01 104: 1.01



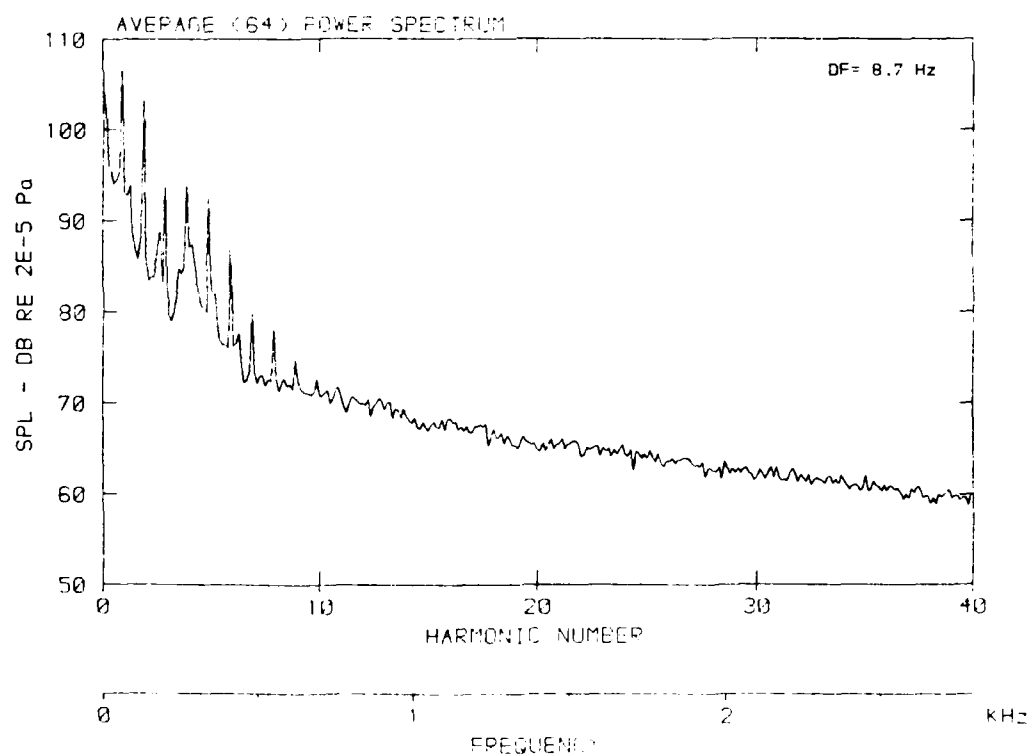
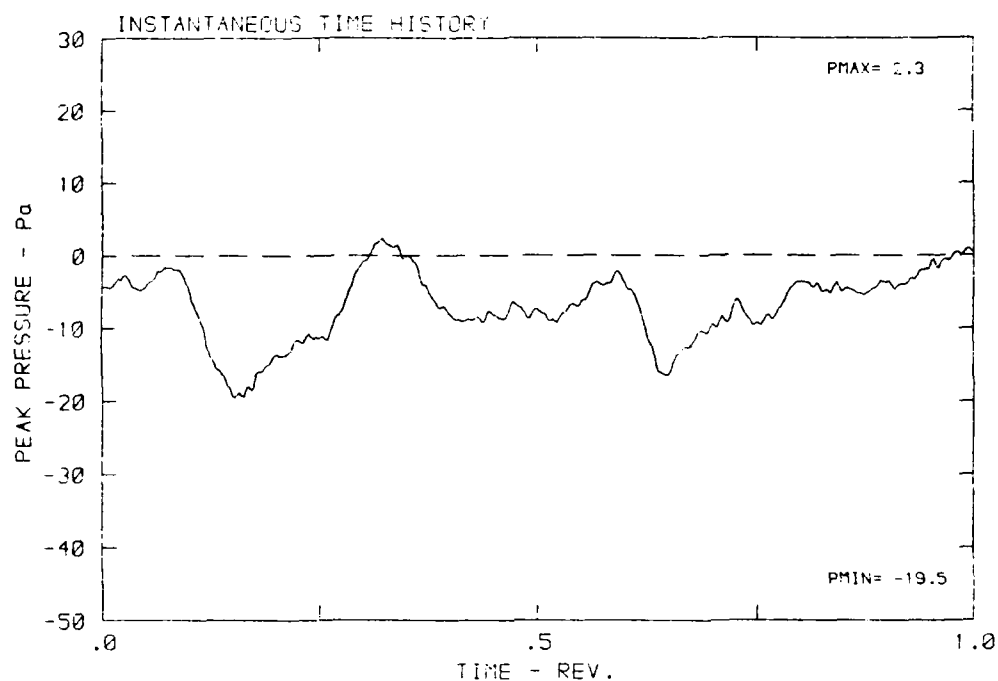
DATA POINTS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

p: 10.3" III: .5734 R: 2100 rpm V: 0.231 ϕ : -3.8" T: 103.3



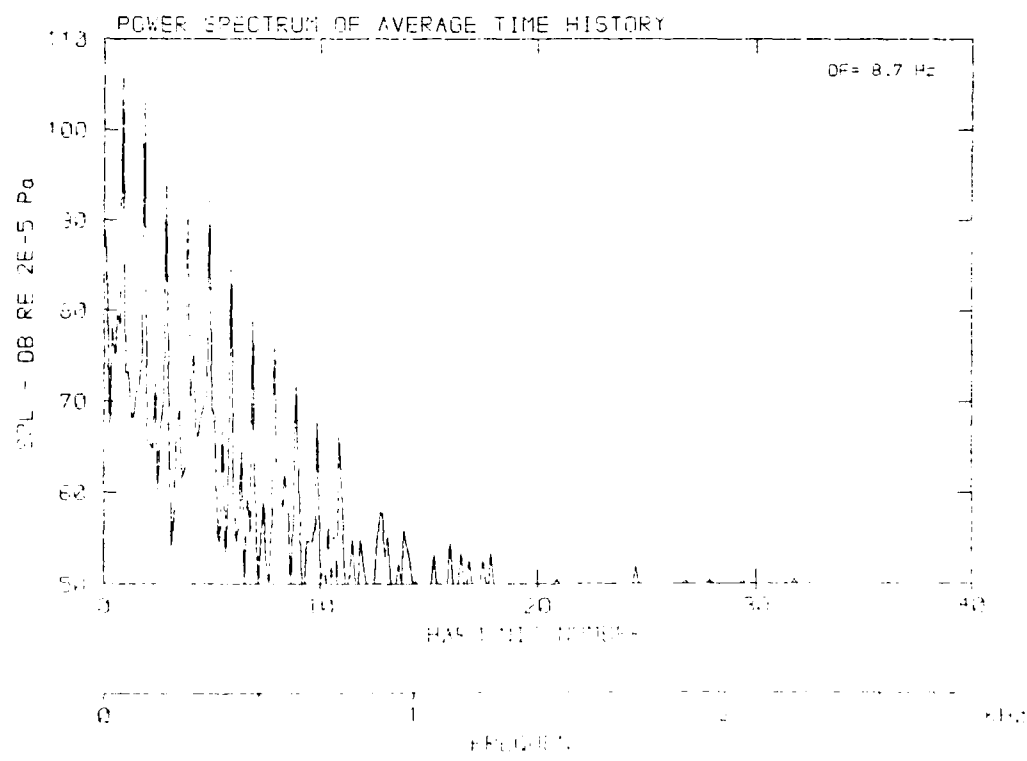
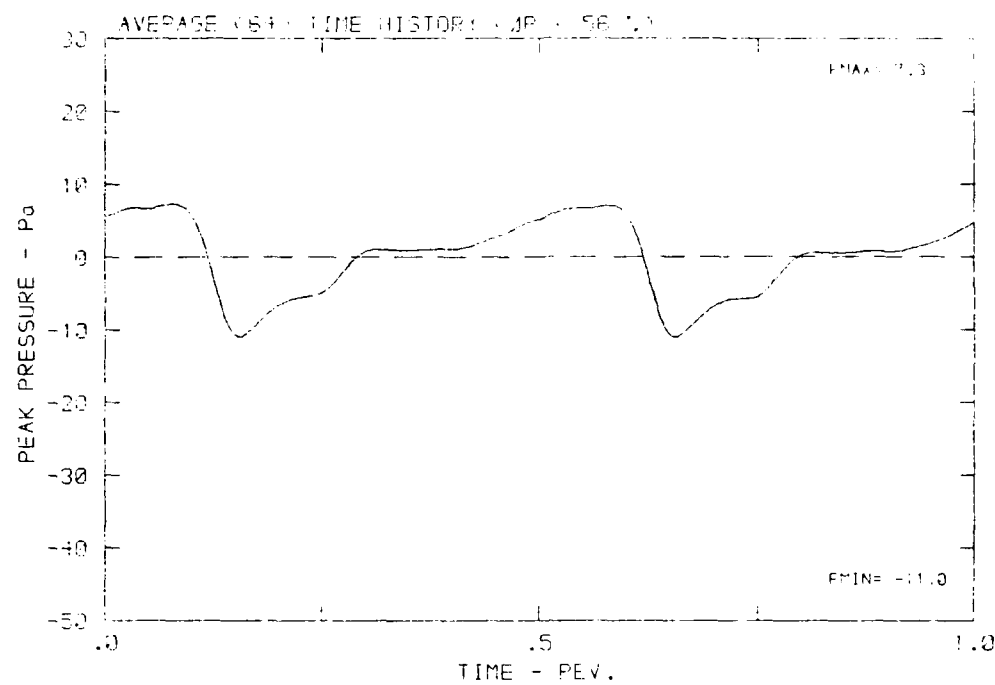
DATA POINT: LN-1 RUN: 154 NP: 3

β : 19.9° MH: .6734 n: 2100 rpm V: 0.1231 ϕ : -3.6° T: 285.5

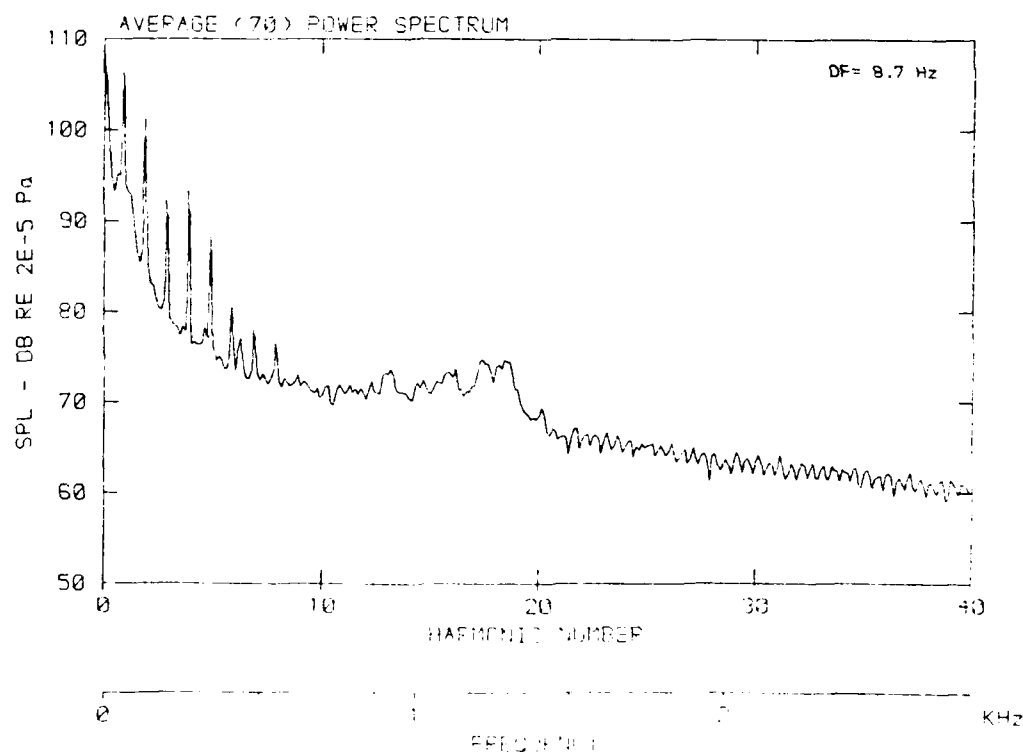
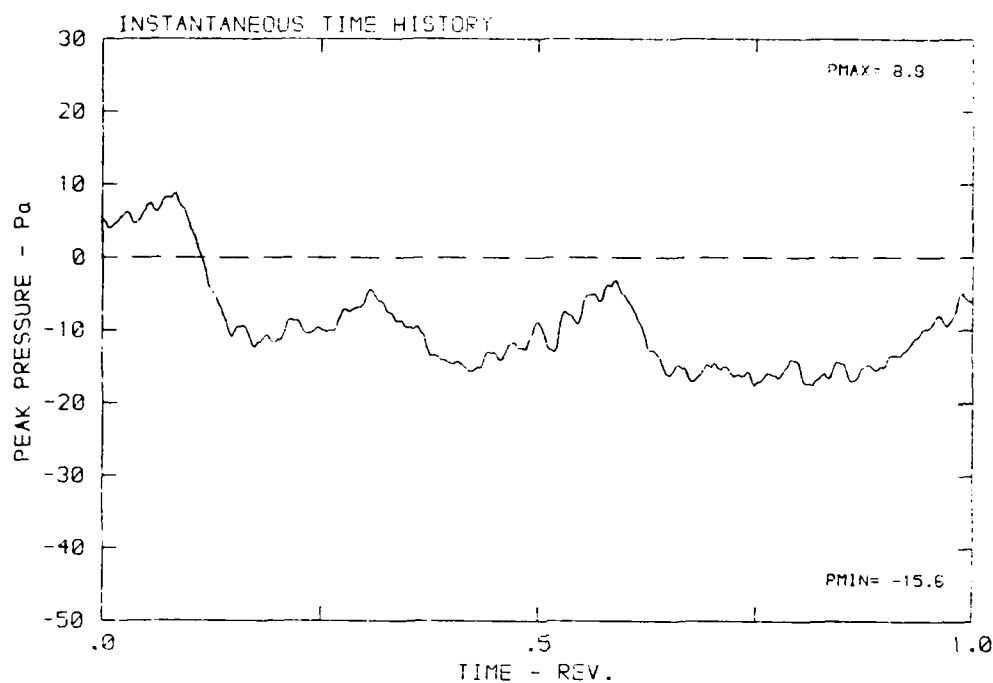


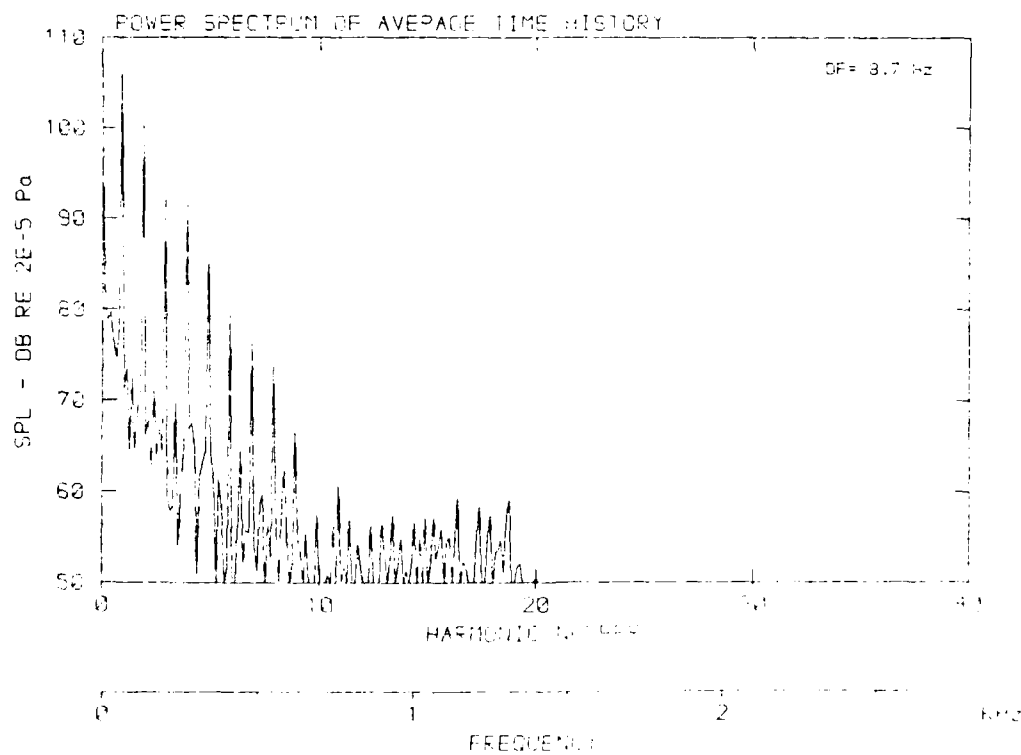
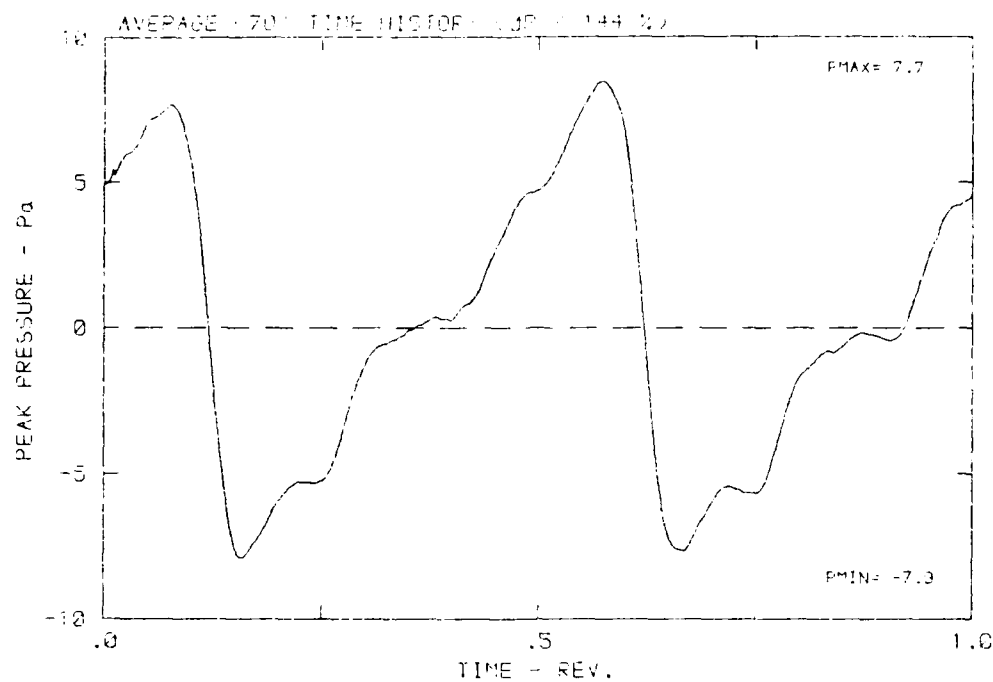
DATA POINT: LA-1 RUN: 154

β : 19.9° RH: .6734 n: 2100 rpm VIB: .231 L: 3.98 T: 234.2



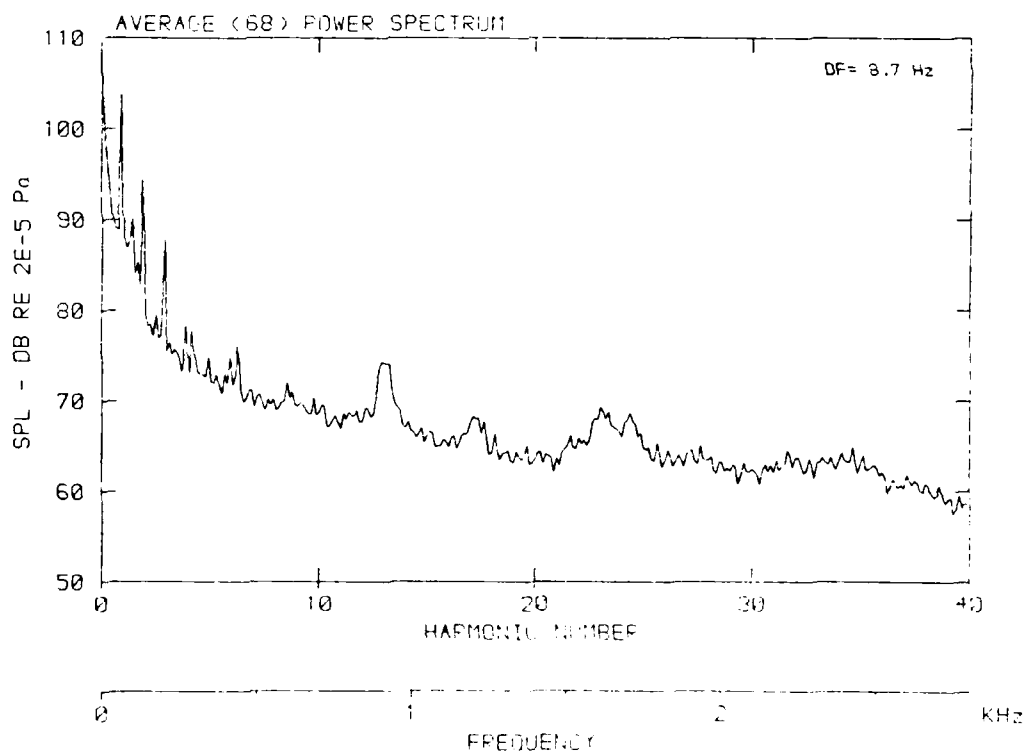
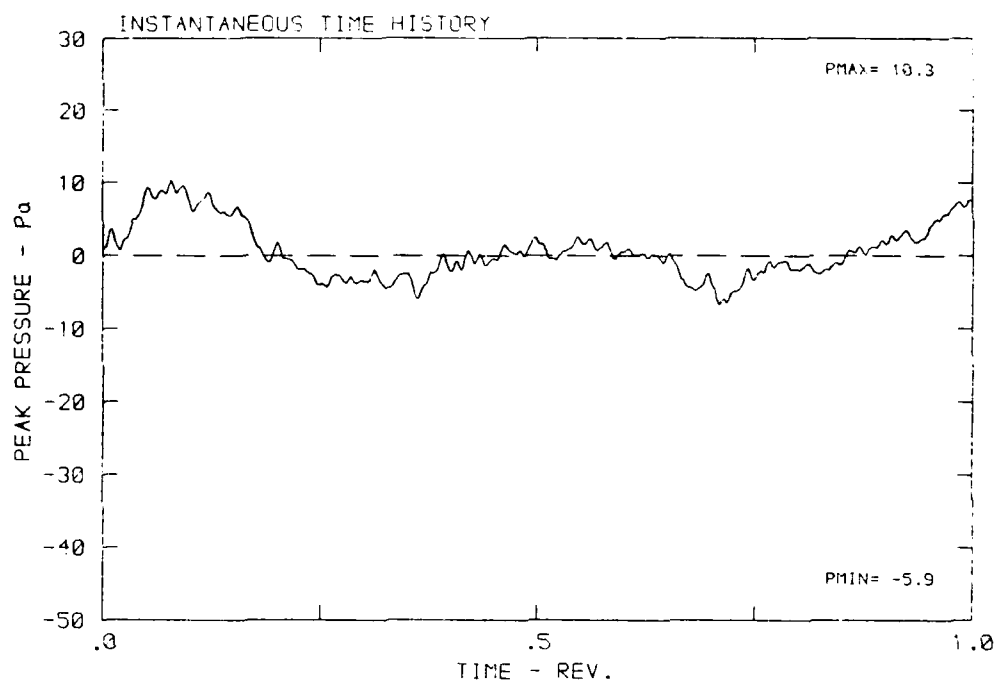
p: 19.9° PH: .6734 n: 2100 rpm v: 0: .135 f: -3.6° T: 239.5 K



$$\theta: 19.5^\circ \quad \theta_4: 16.734^\circ \quad \omega: 2100 \text{ rpm} \quad \gamma: 0.1231 \quad \phi: -1.8^\circ \quad \tau: 281.3 \text{ s}$$


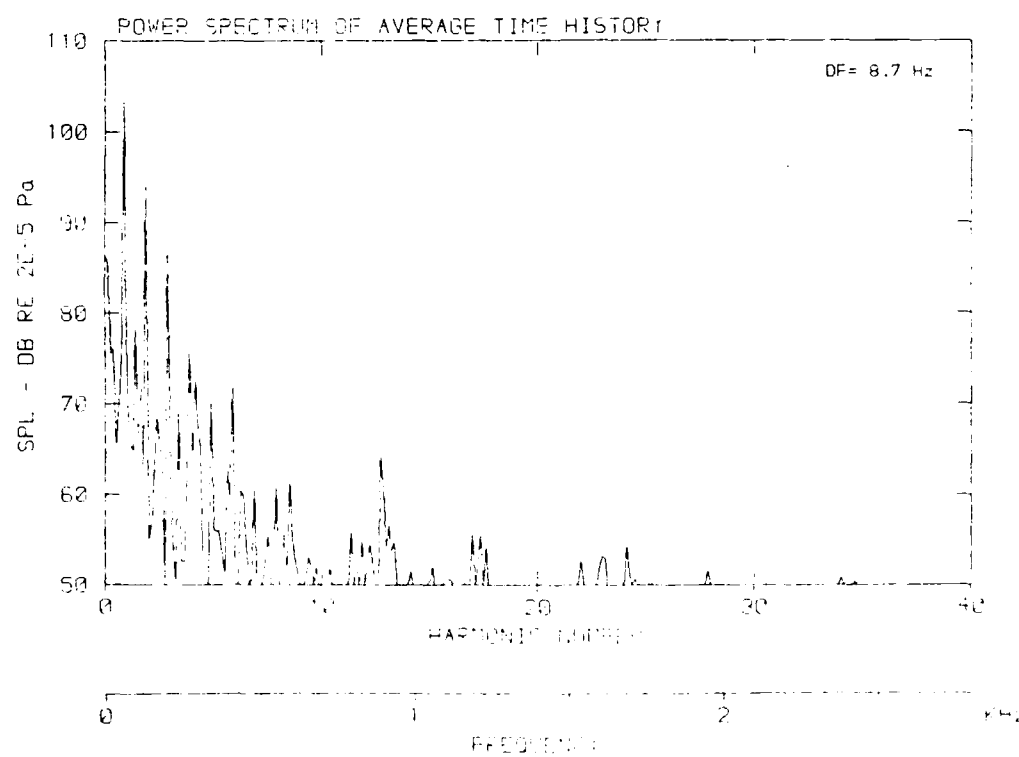
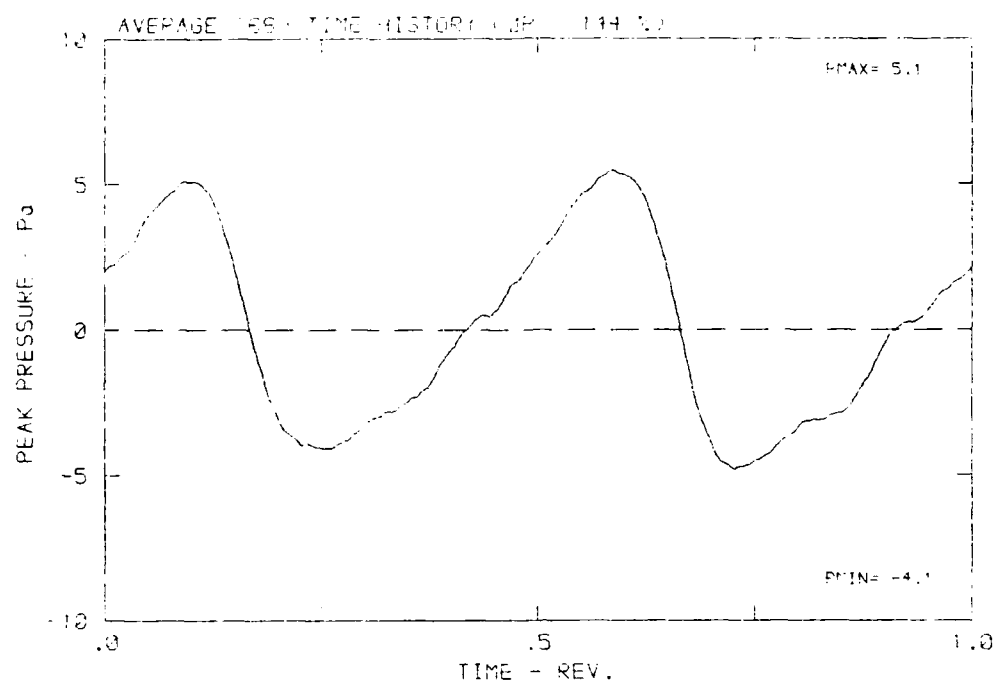
DATA POINT: LN-1 RUN: .54 MP: 7

β : 19.9° MH: .8734 n: 2100 rpm μ : .001 ϕ : -3.8° T: 288.5 s



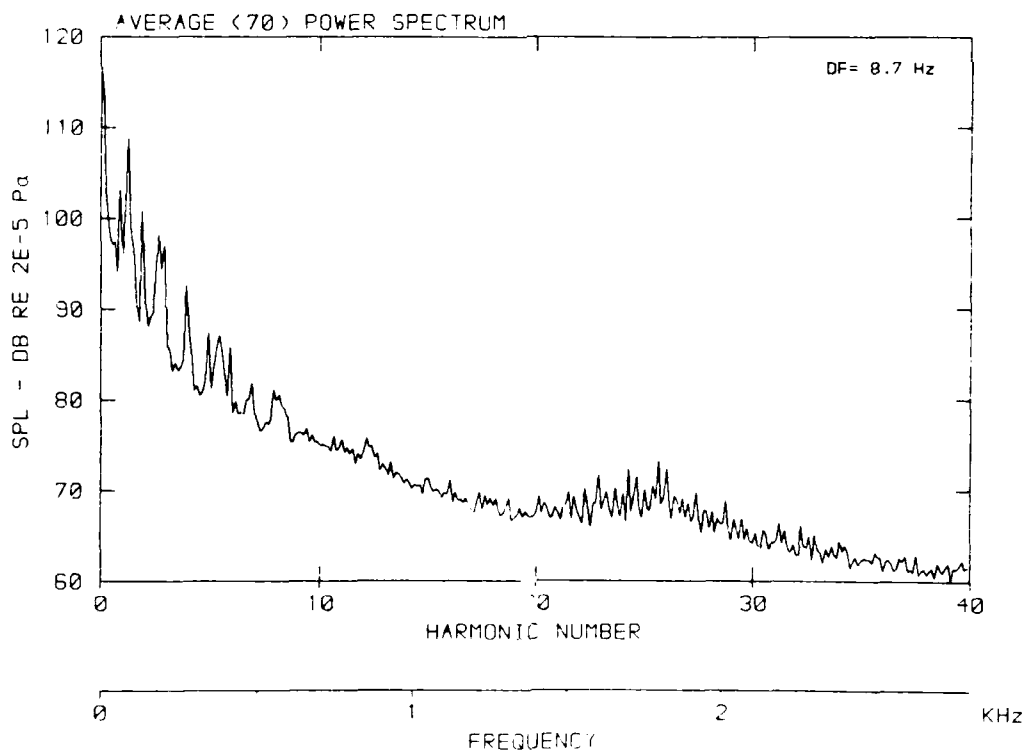
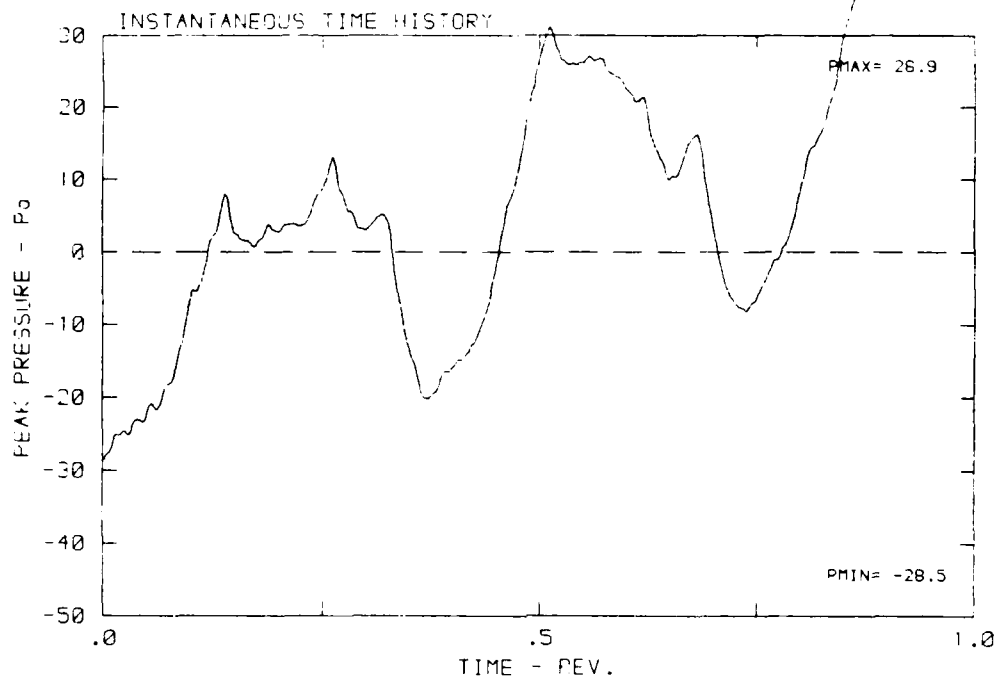
DATA POINT: LN-1 P-A: 15.1

β : 19.9° MH: .6734 n: 2180 rpm v: .231 p: -2.8° T: 298.7



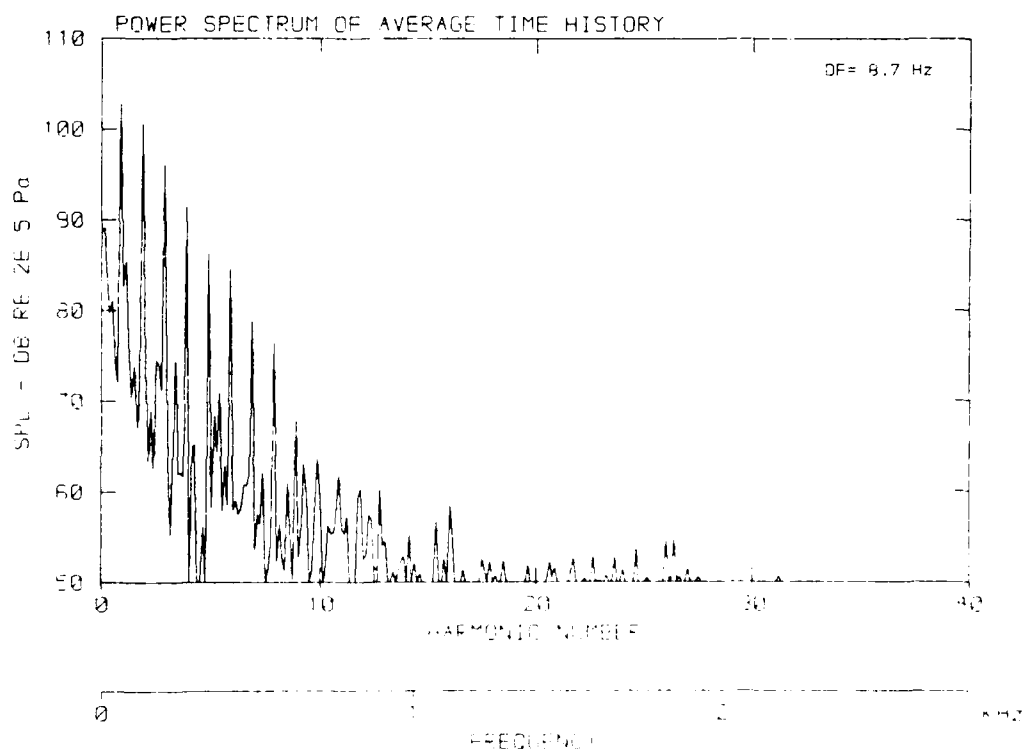
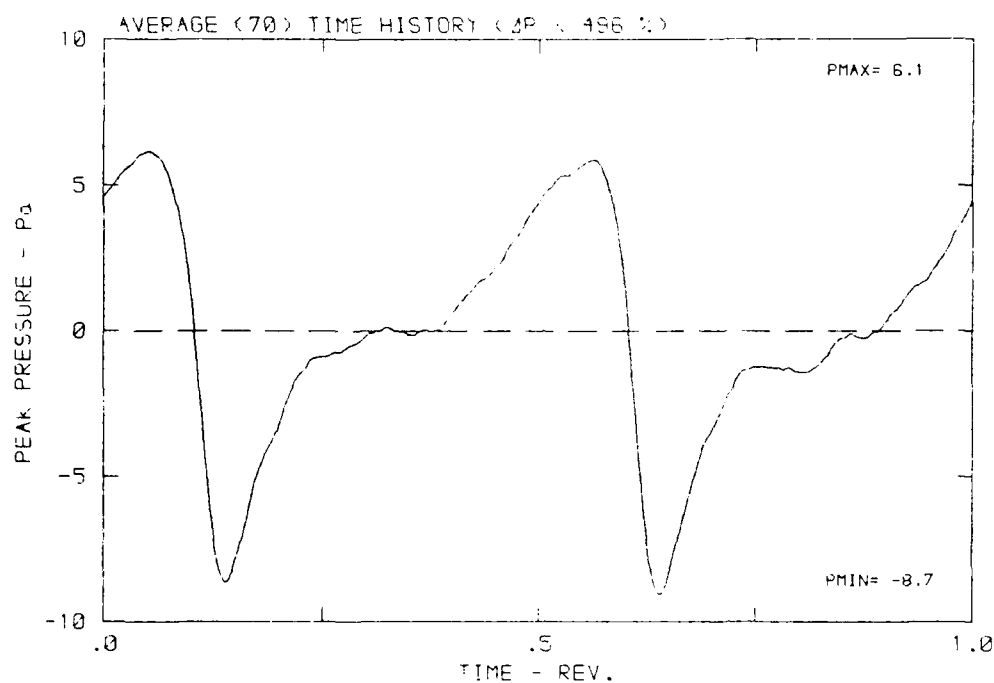
DATA POINT: LN-1 RUN: 154 MP: 8

p: 19.3° MH: .6734 n: 2100 rpm V/U: .231 W: -3.84 T: 298.5 K



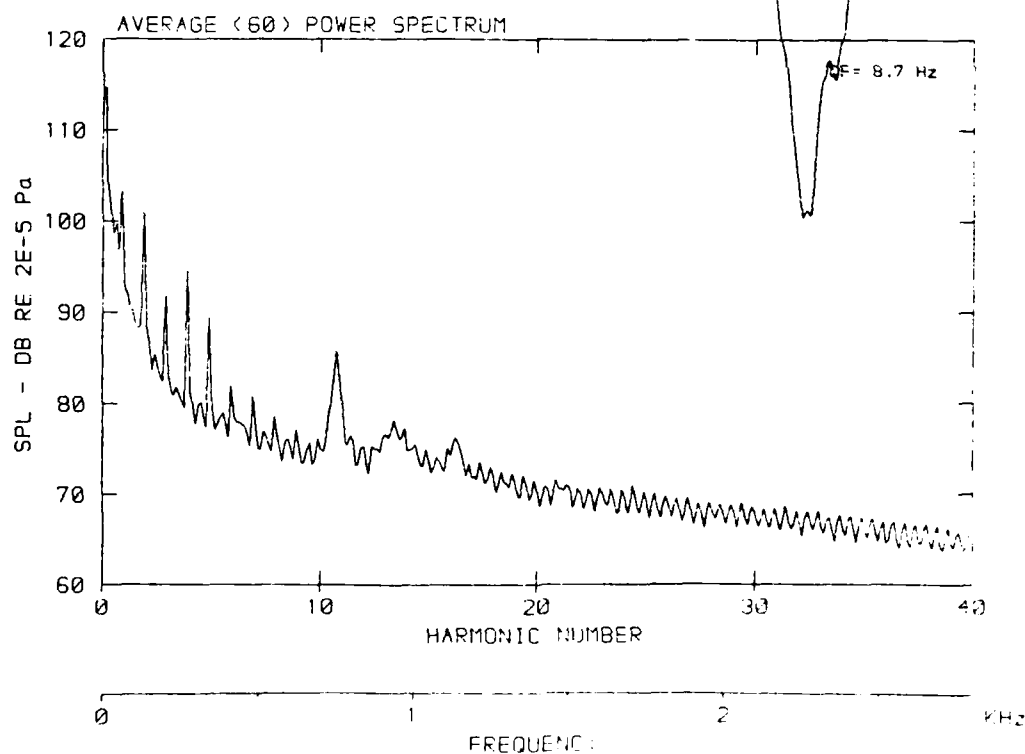
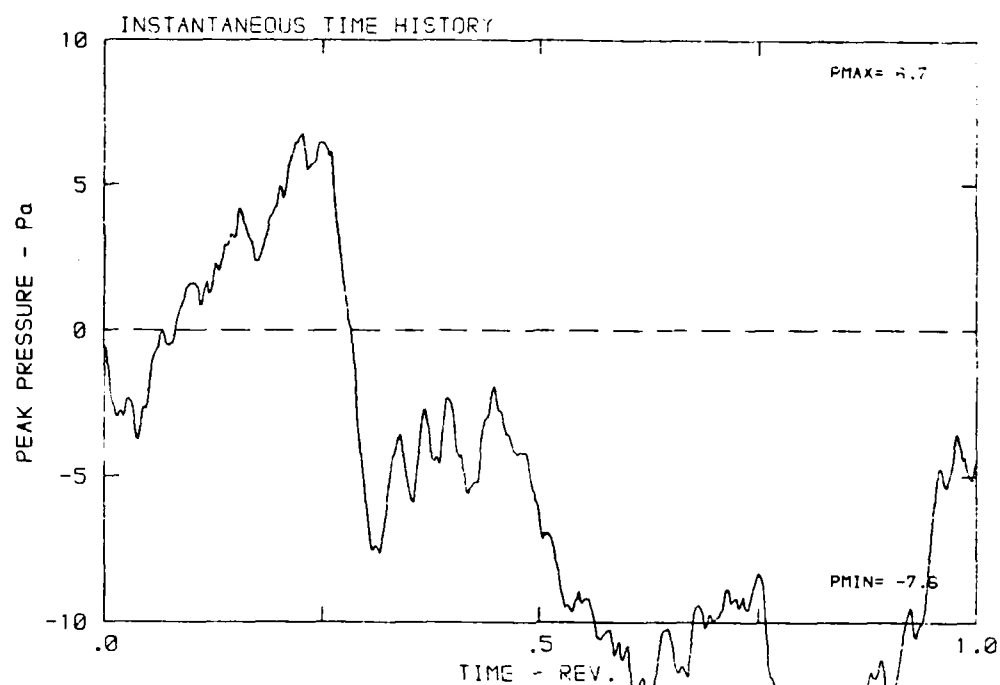
DATA POINT: LN-1 RUN: 154 MP: 8

β : 19.9° MH: .6734 n: 2100 rpm v_{tu} : .231 ϕ : -3.8° T: 288.5 K



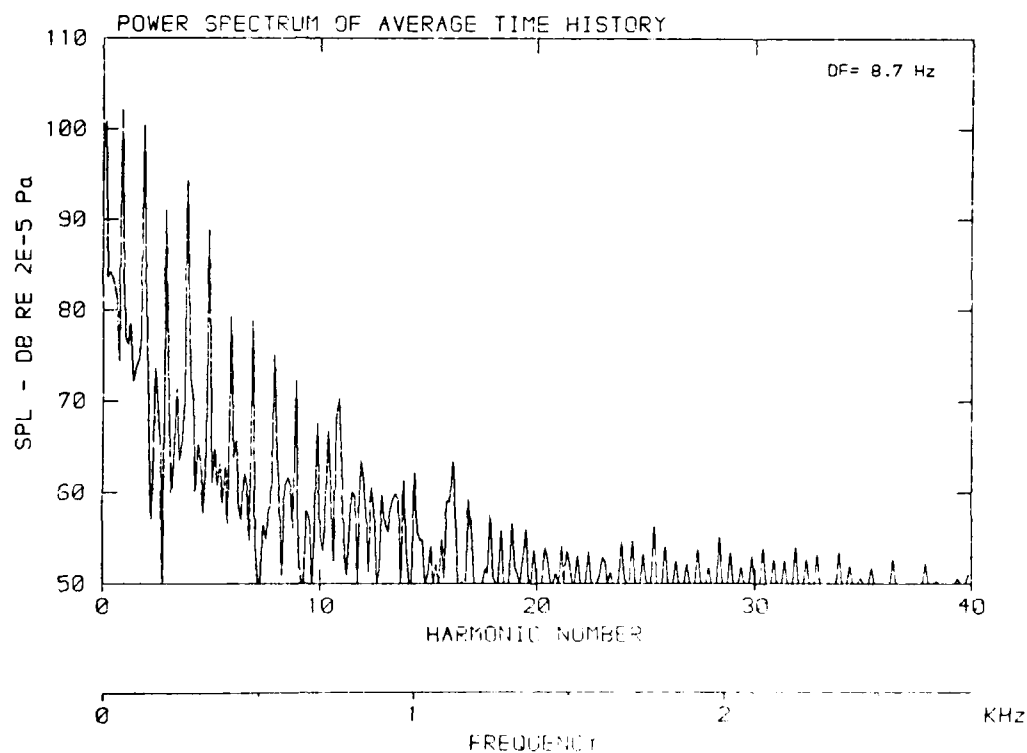
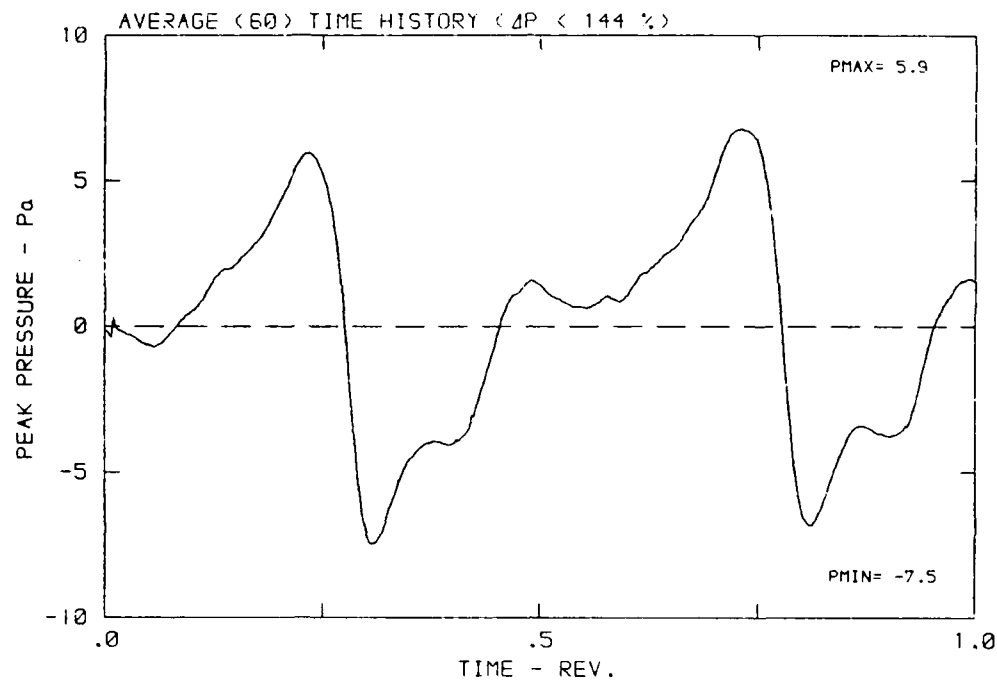
DATA POINT: LN-1 RUN: 154 RE: 3

β : 19.9° MH: .6734 n: 2100 rpm vku: .231 ϕ : -3.6° τ : 236.5



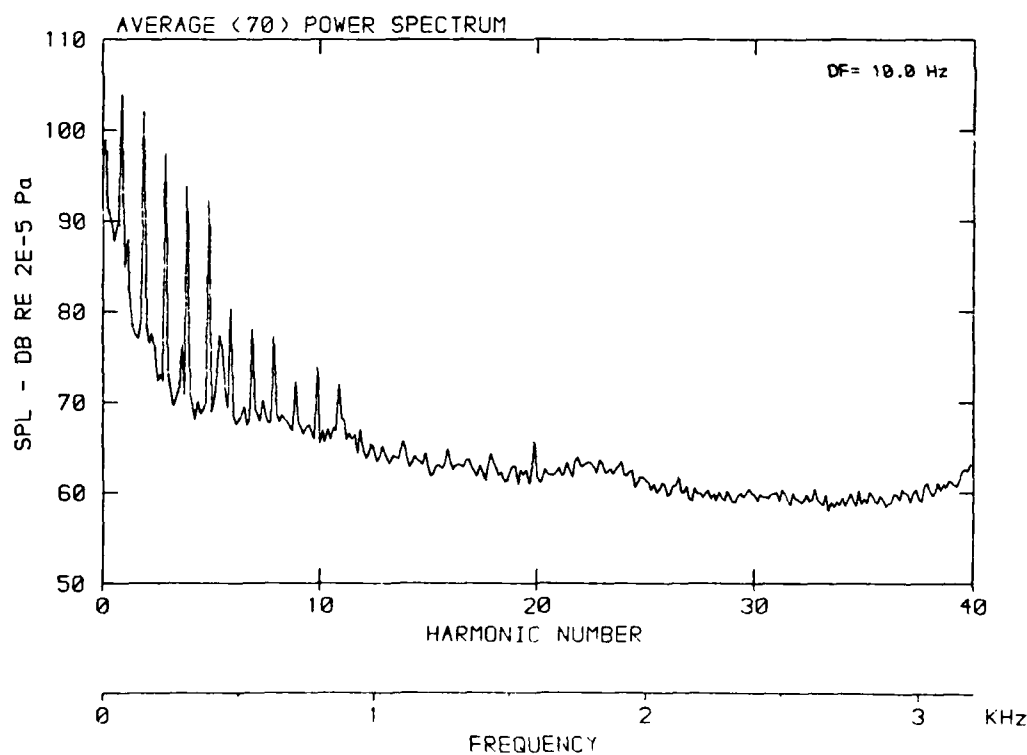
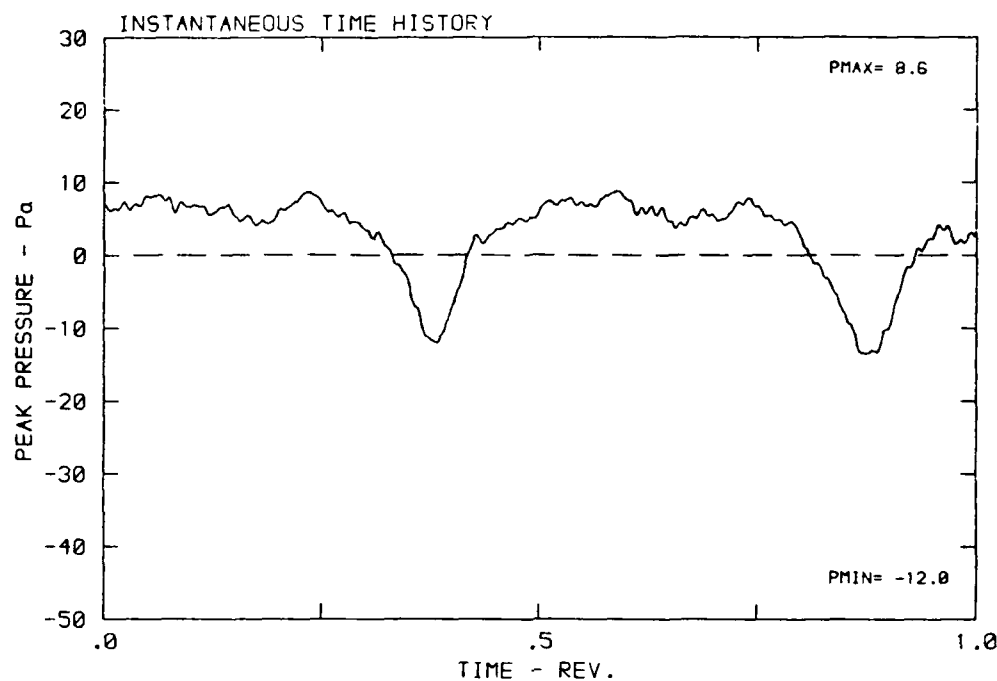
DATA POINT: LN-1 RUN: 154 MP: 9

β : 19.9° MH: .6734 n: 2100 rpm v/u: .231 ϕ : -3.8° T: 288.5 K



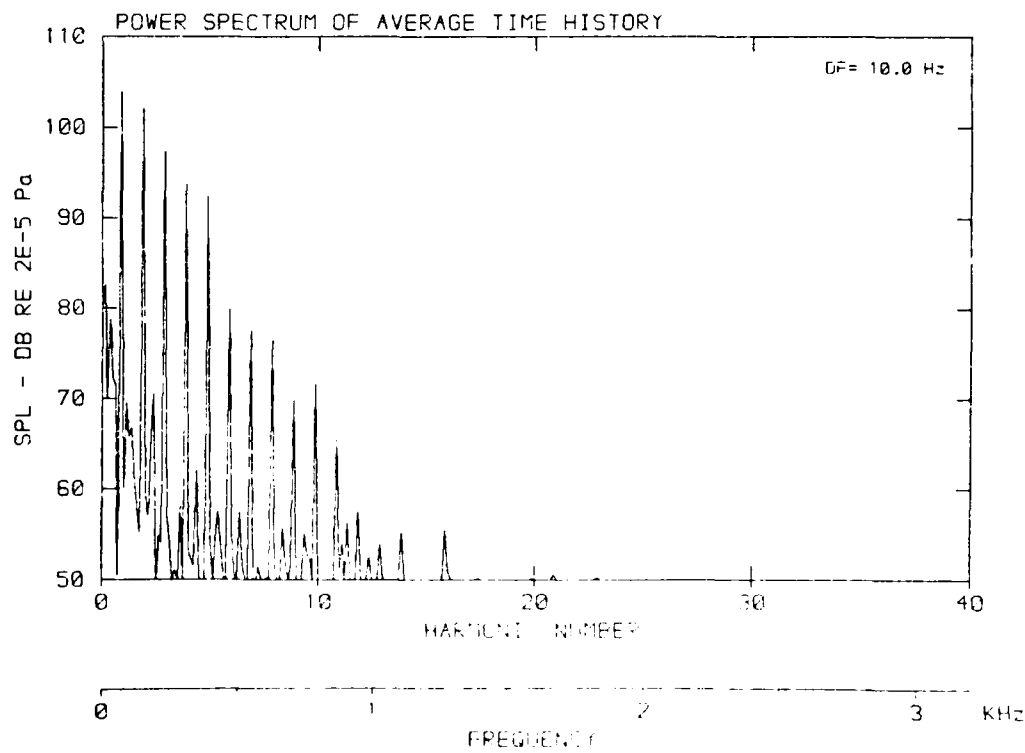
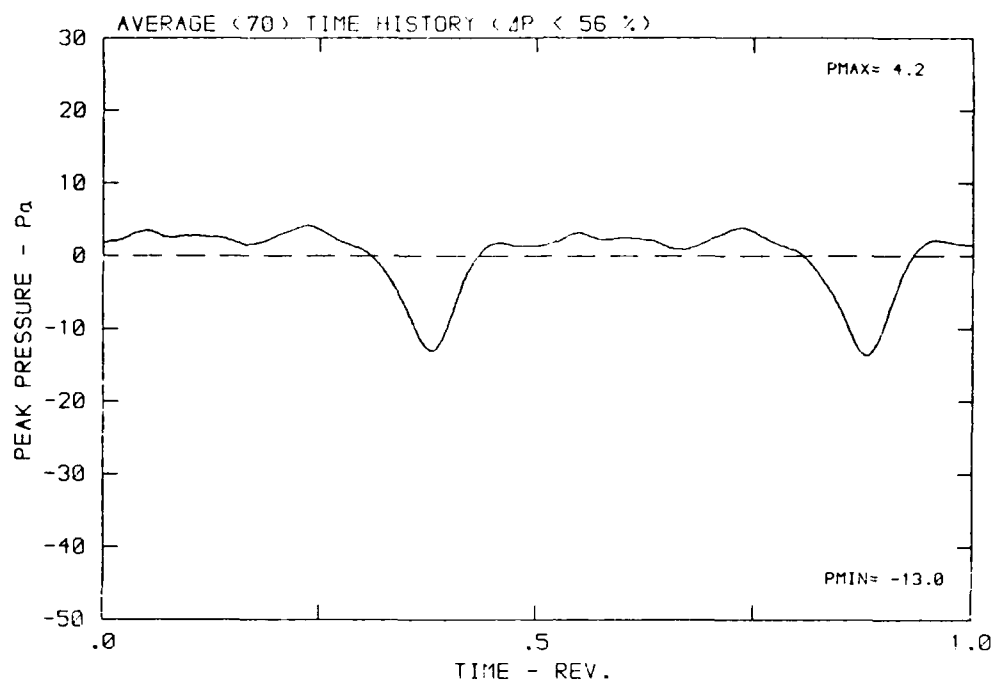
DATA POINT: LN-2 RUN: 155 MP: 1

β : 19.9° MH: .7645 n: 2400 rpm v/u: .202 ϕ : -3.9° T: 288.9 K



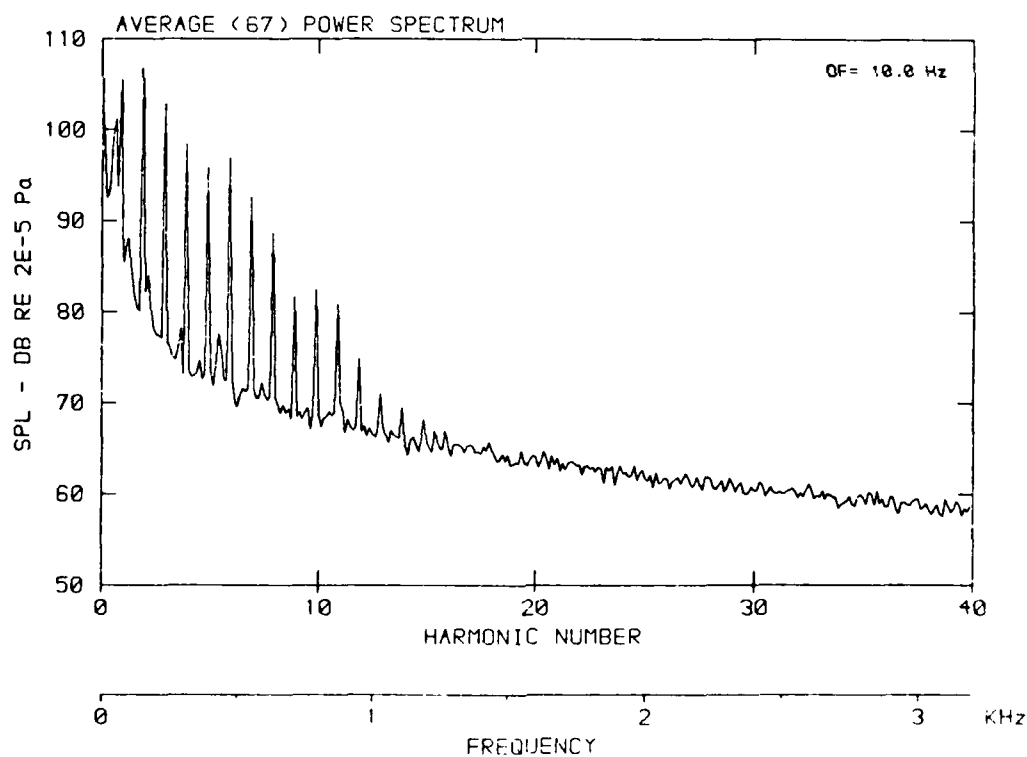
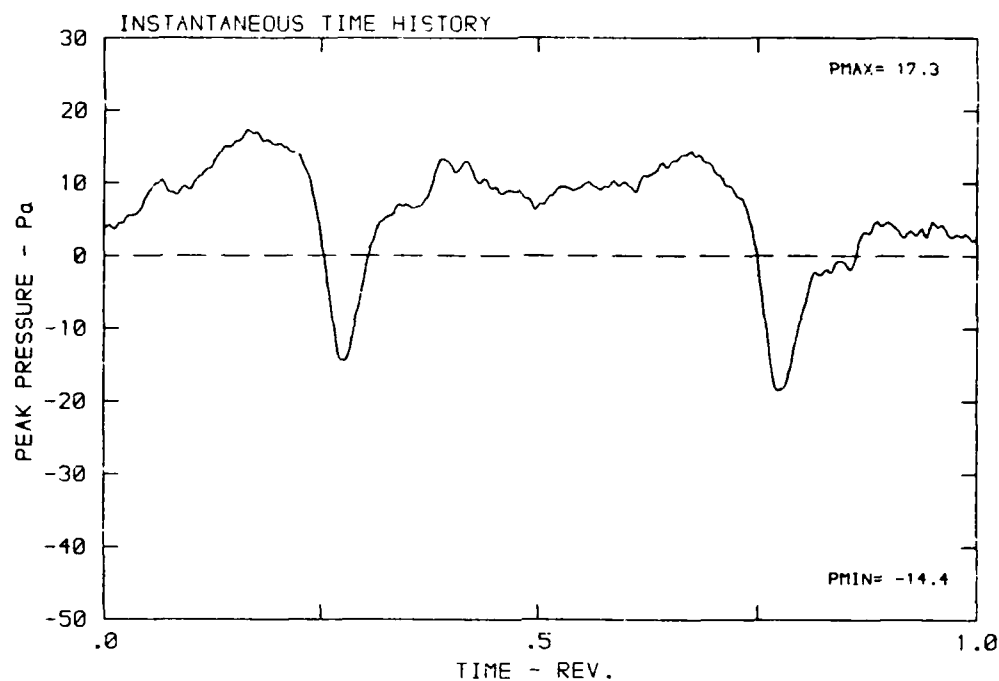
DATA POINT: LN-2 RUN: 155 MP: 1

β : 19.9° MH: .7645 n: 2400 rpm v/u: .202 ϕ : -3.8° T: 288.9 K



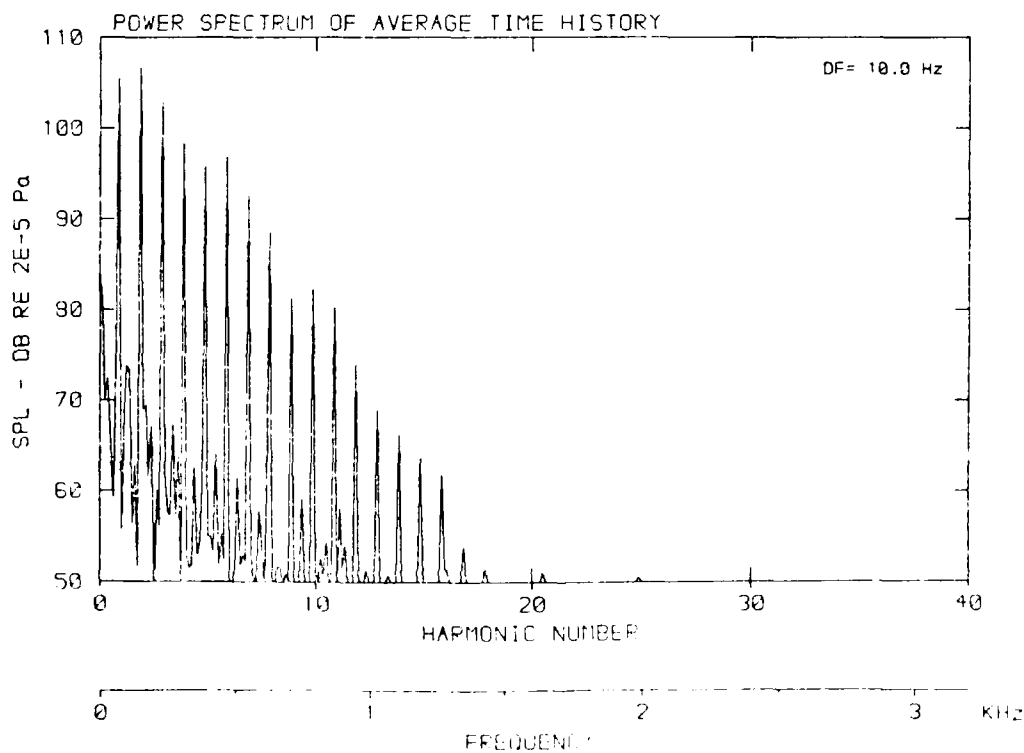
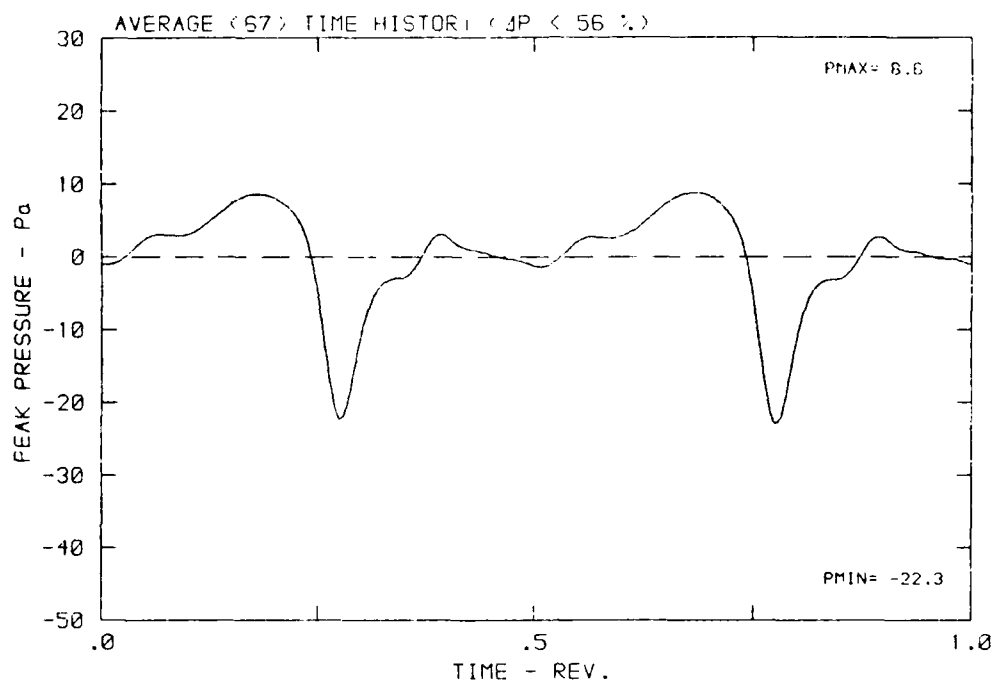
DATA POINT: LN-2 RUN: 155 MP: 2

β : 19.9° MH: .7645 n: 2400 rpm v/u : .202 ϕ : -3.8° T: 288.9 K



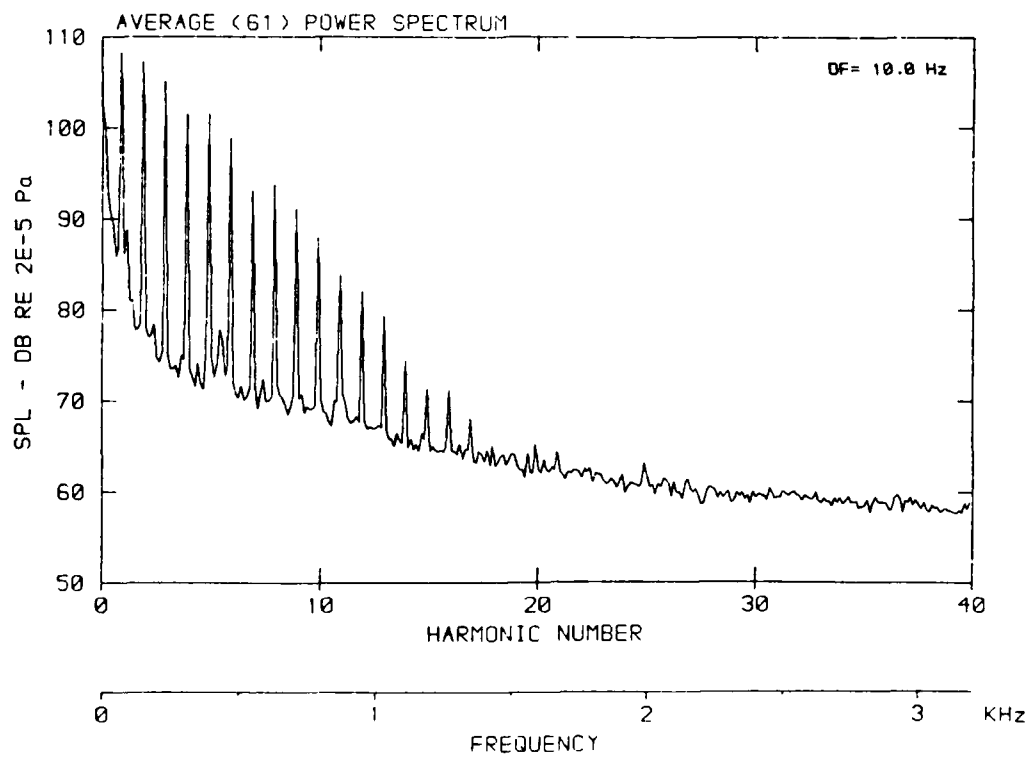
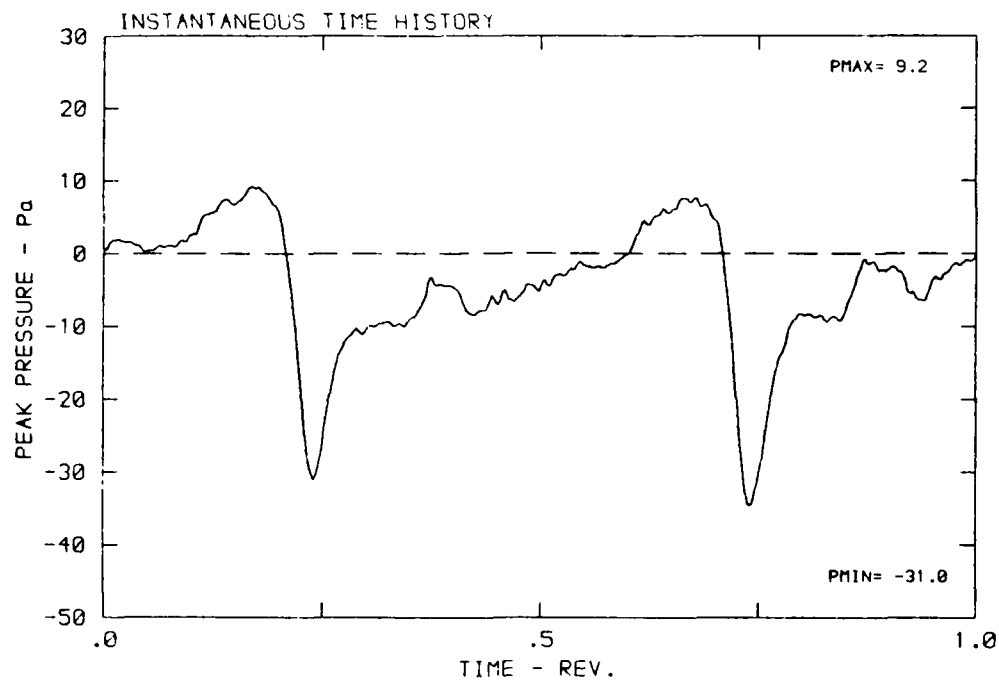
DATA POINT: LN-2 RUN: 155 MP: 2

β : 19.9° MH: .7645 n: 2400 rpm v/u: .202 ϕ : -3.8° T: 288.9 K



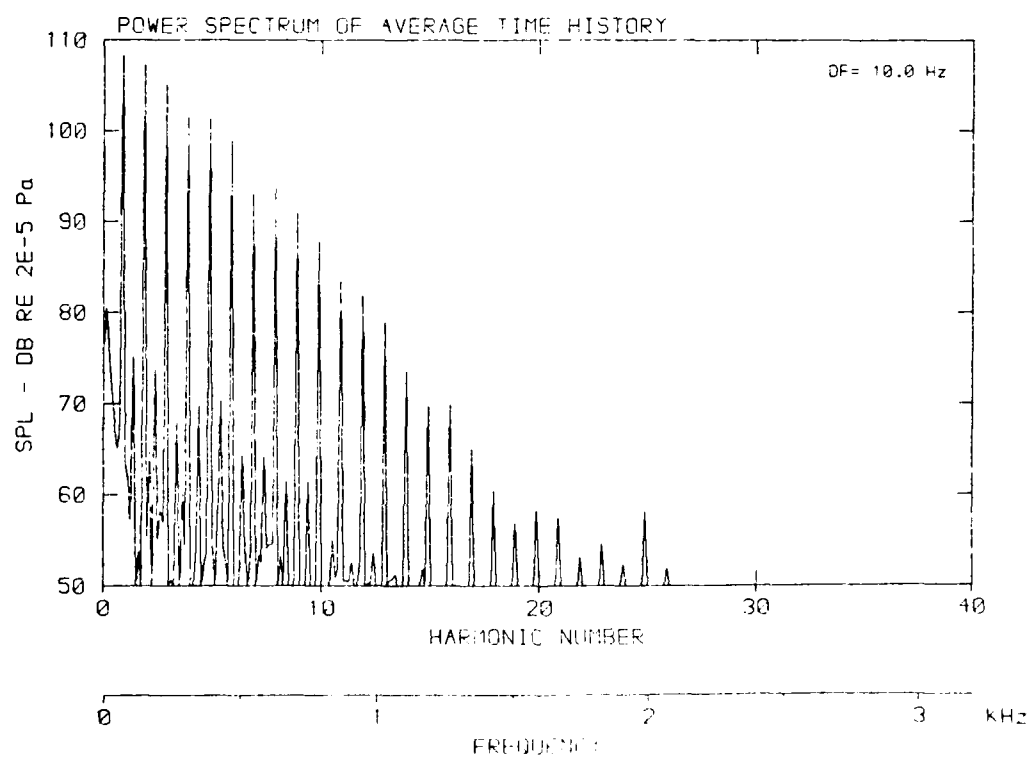
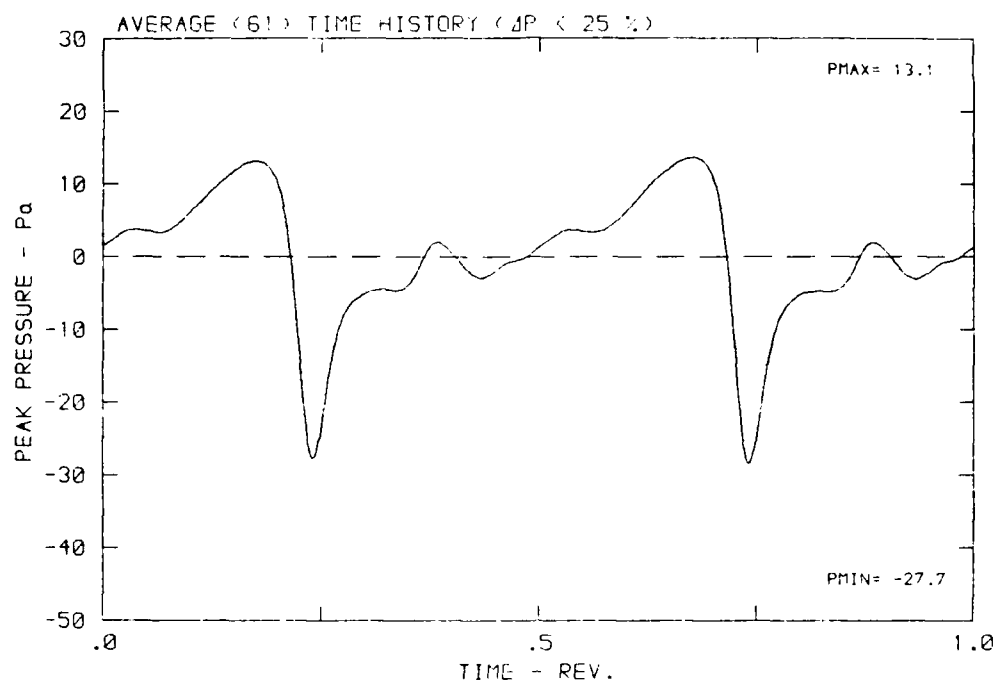
DATA POINT: LN-2 RUN: 155 MP: 3

β : 19.9° MH: .7645 n: 2400 rpm v/u : .202 ϕ : -3.8° T: 288.9 K



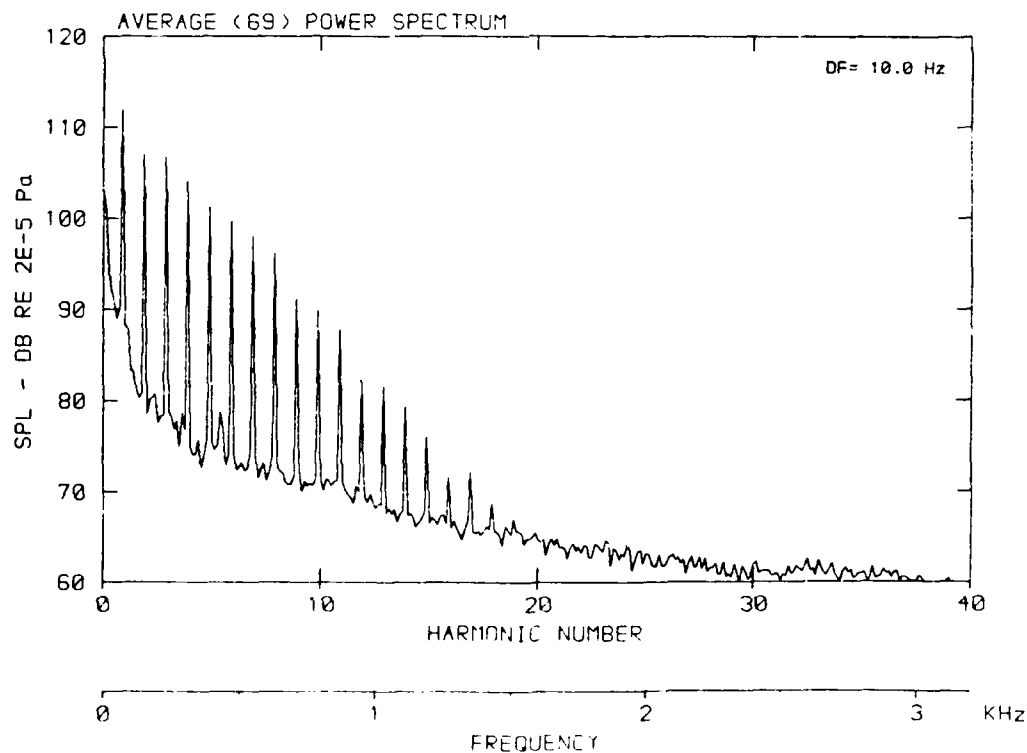
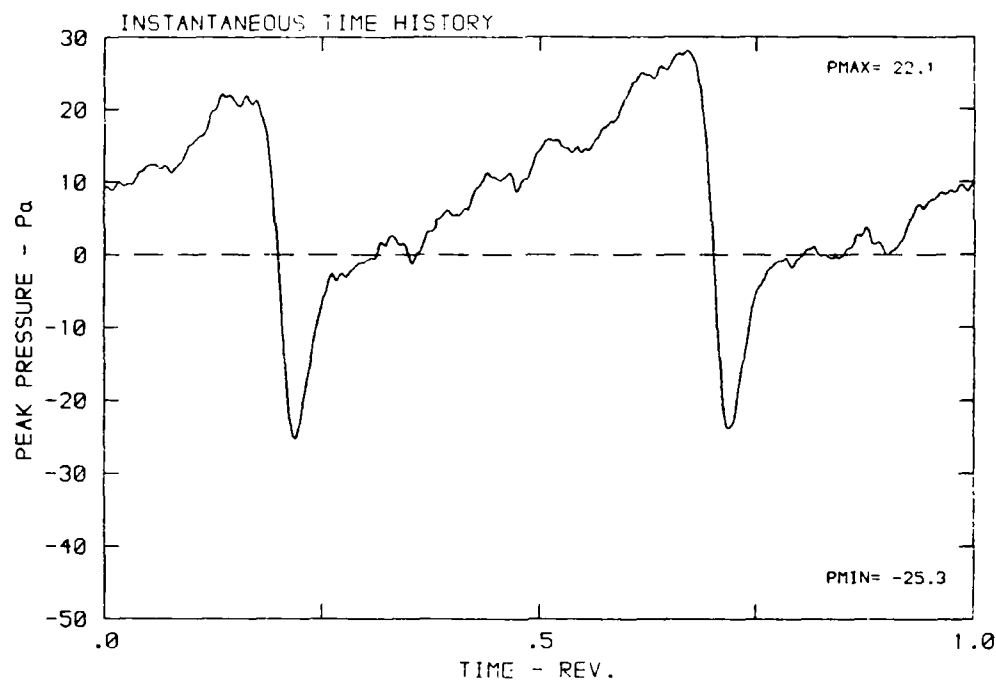
DATA POINT: LN-2 RUN: 155 MP: 3

β : 19.9° MH: .7645 n: 2400 rpm v/u : .202 ϕ : -3.8° T: 266.9 K



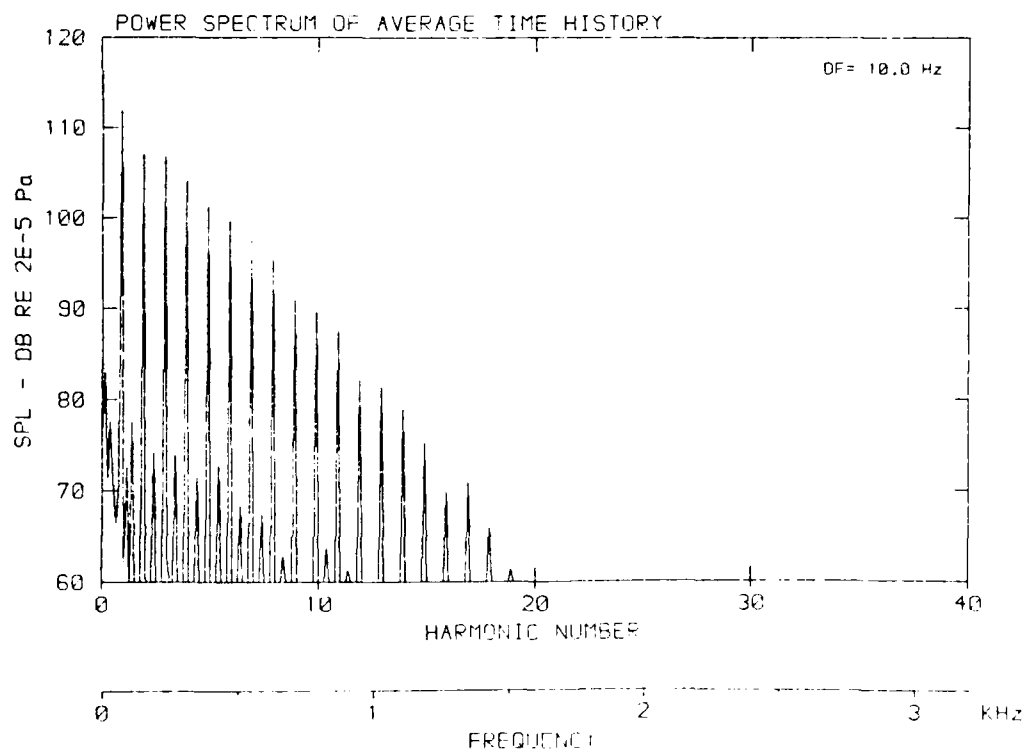
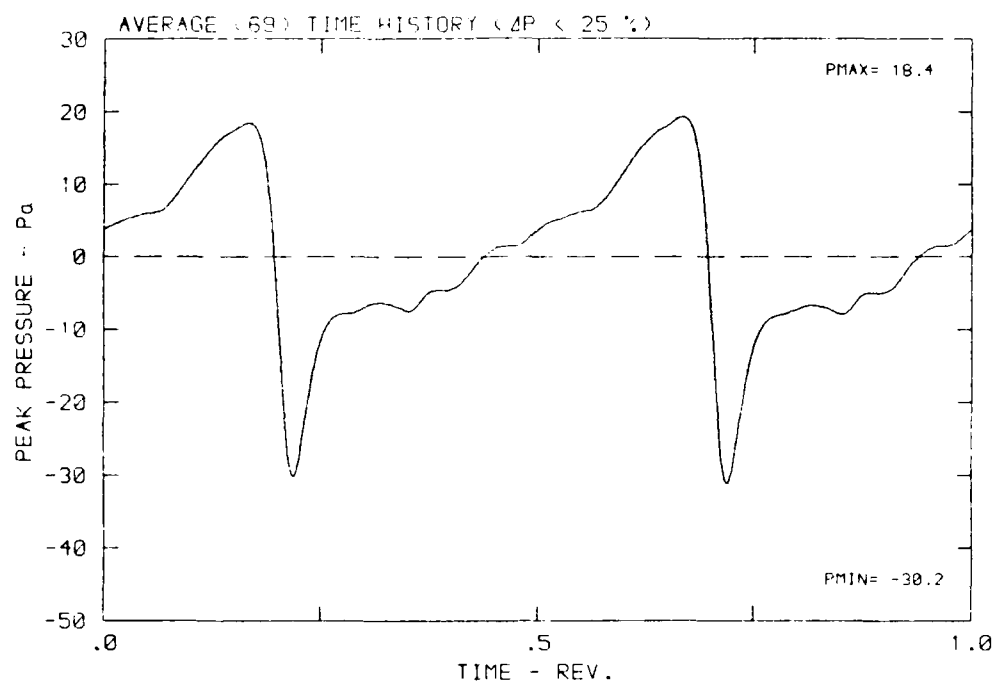
DATA POINT: LN-2 RUN: 155 MP: 4

β : 19.9° MH: .7645 n: 2400 rpm v/u : .202 ϕ : -3.8° T: 288.9 K



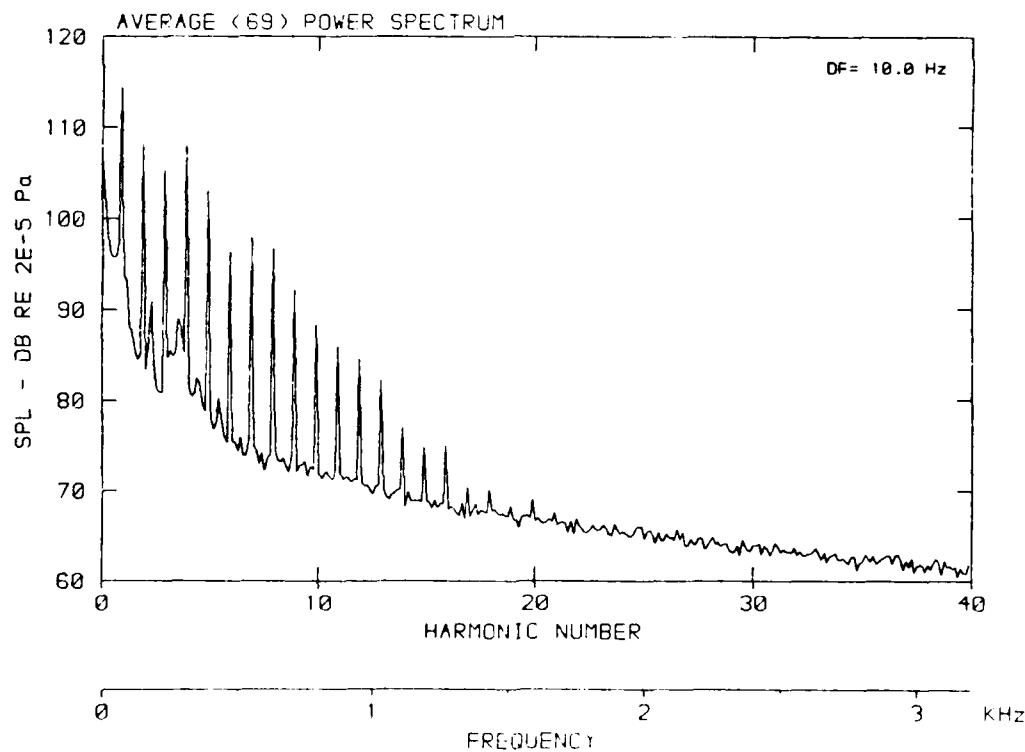
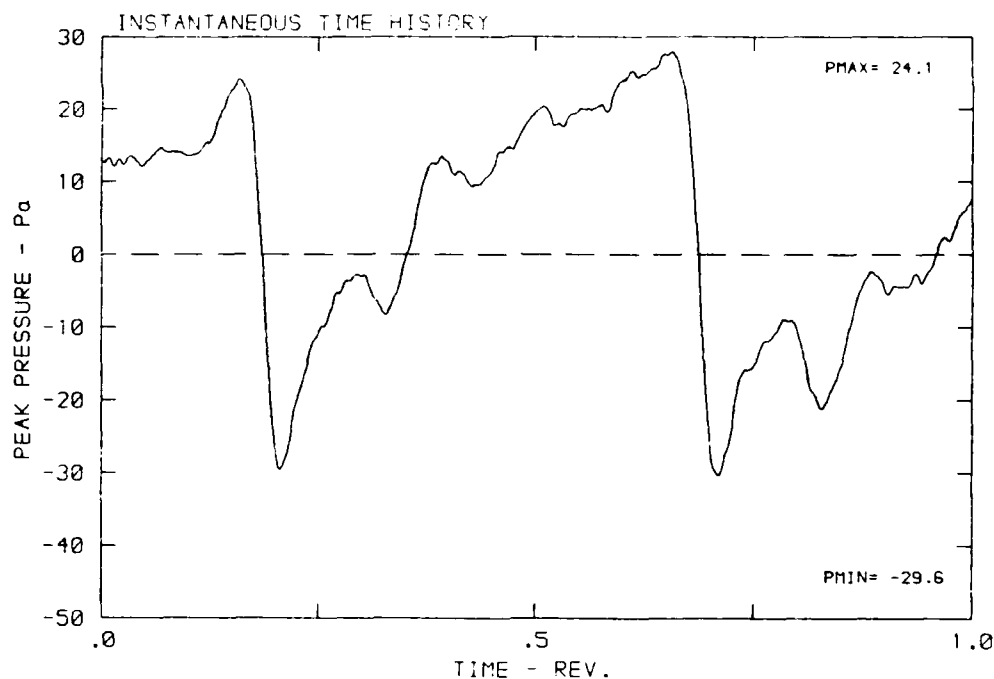
DATA POINT: LN-2 RUN: 155 MP: 4

β : 19.9° MH: .7645 n: 2400 rpm v/u : .202 ϕ : -3.8° T: 289.9 K



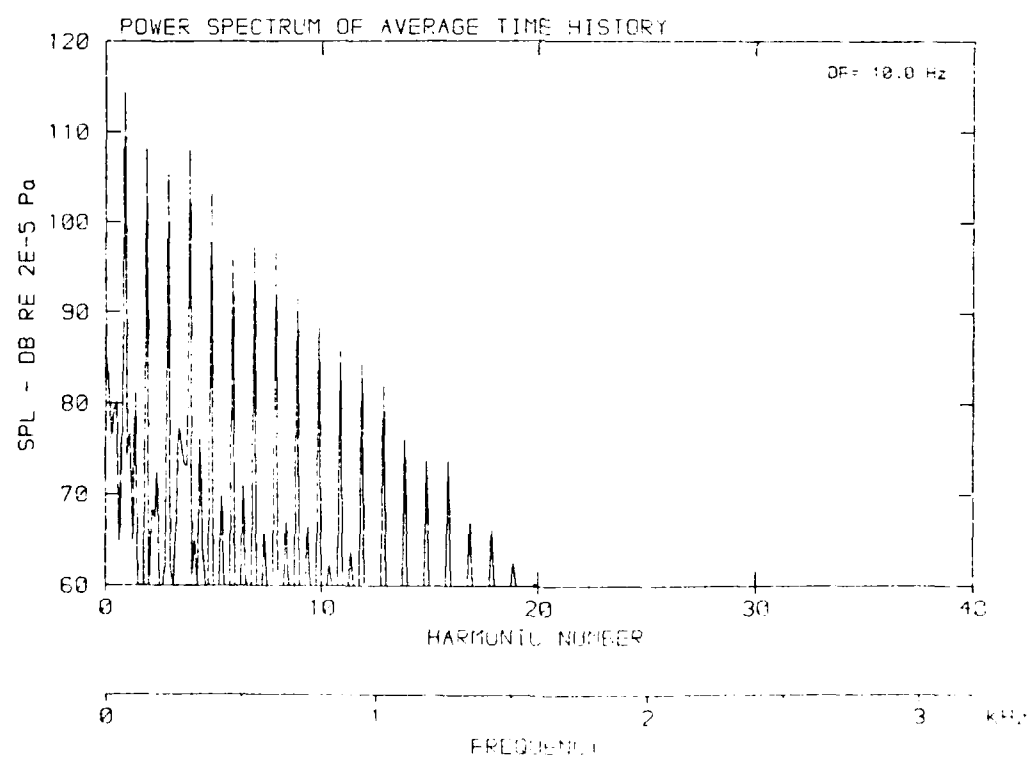
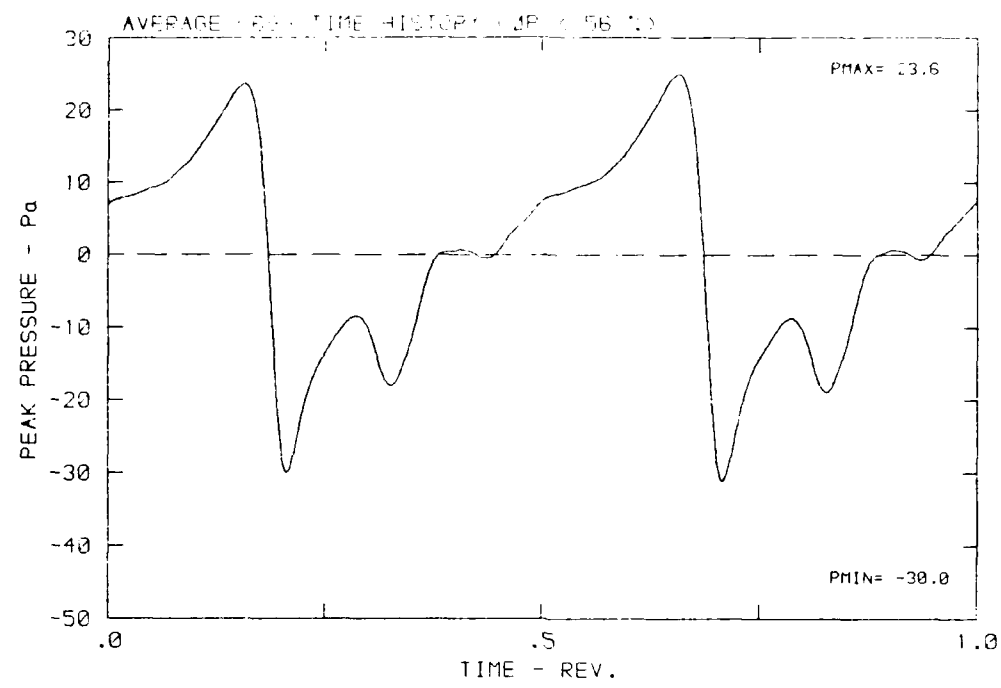
DATA POINT: LN-2 RUN: 155 MP: 5

β : 19.9° MH: .7645 n: 2400 rpm ν_{cr} : .202 ϕ : -3.8° T: 288.9 K



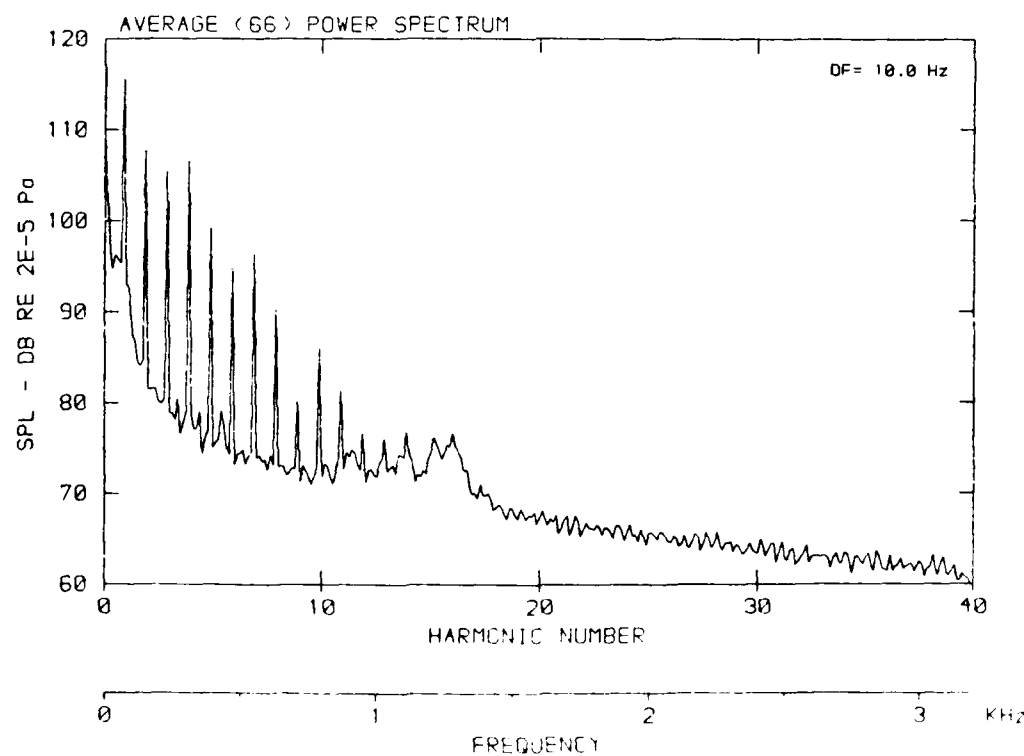
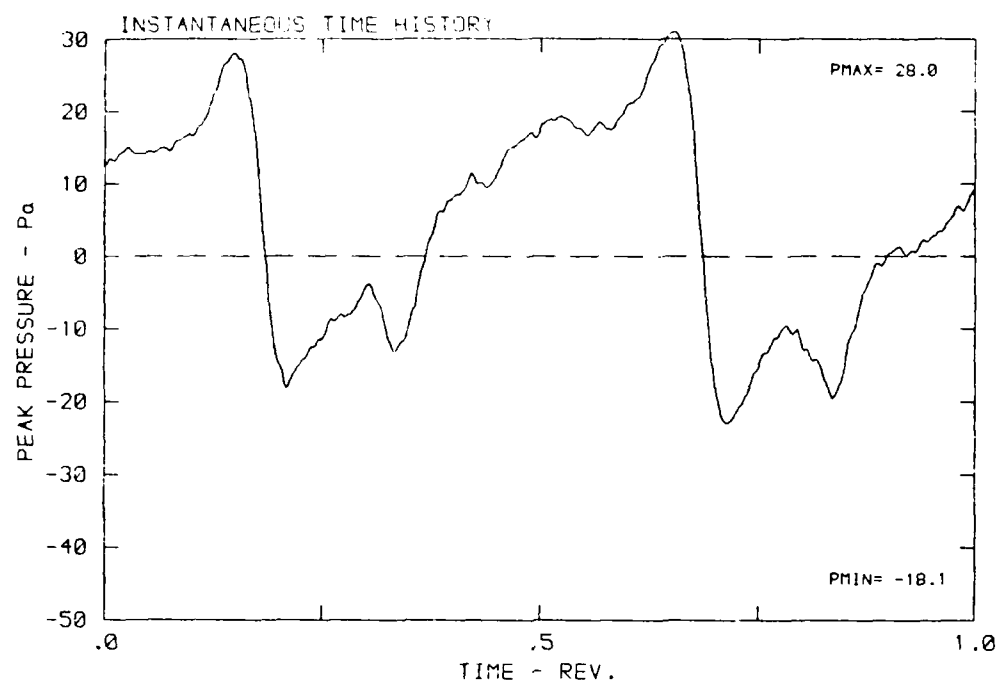
DATA POINT: LN-3 RAL: 155 MFI: 5

β : 19.9° NH: .7645 n: 2400 rpm γ : .202 ϕ : -3.8° T: 206.3 K



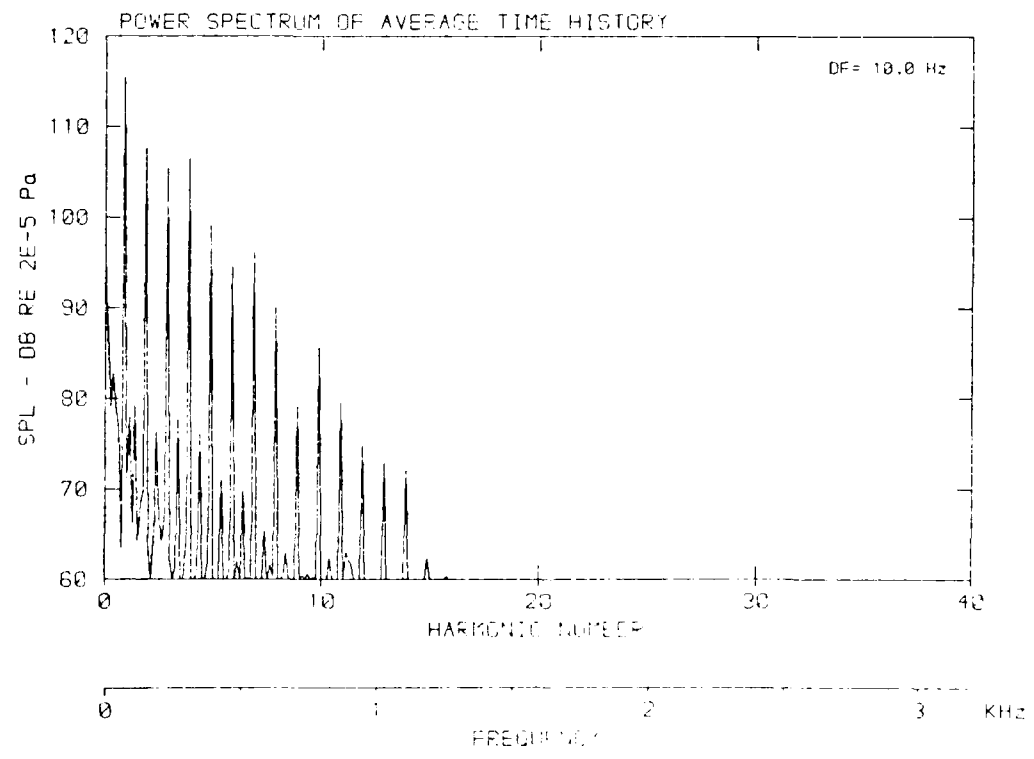
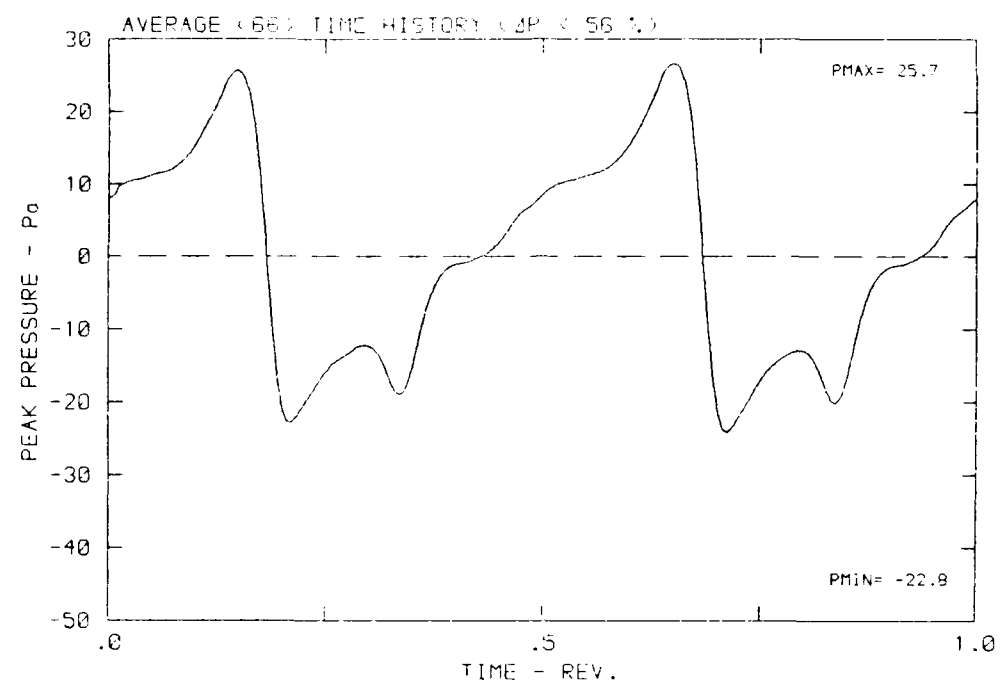
DATA POINT: LN-2 RUN: 155 MP: 6

β : 19.9° MH: .7645 n: 2400 rpm ν : .202 ϕ : -3.6° T: 288.9 K



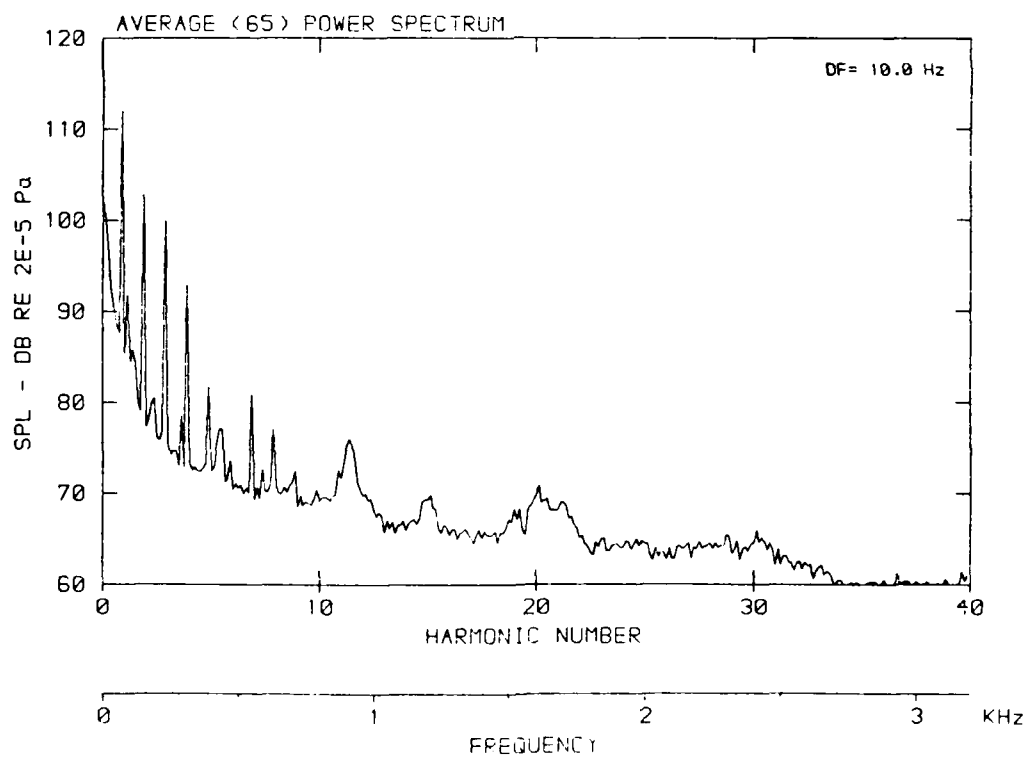
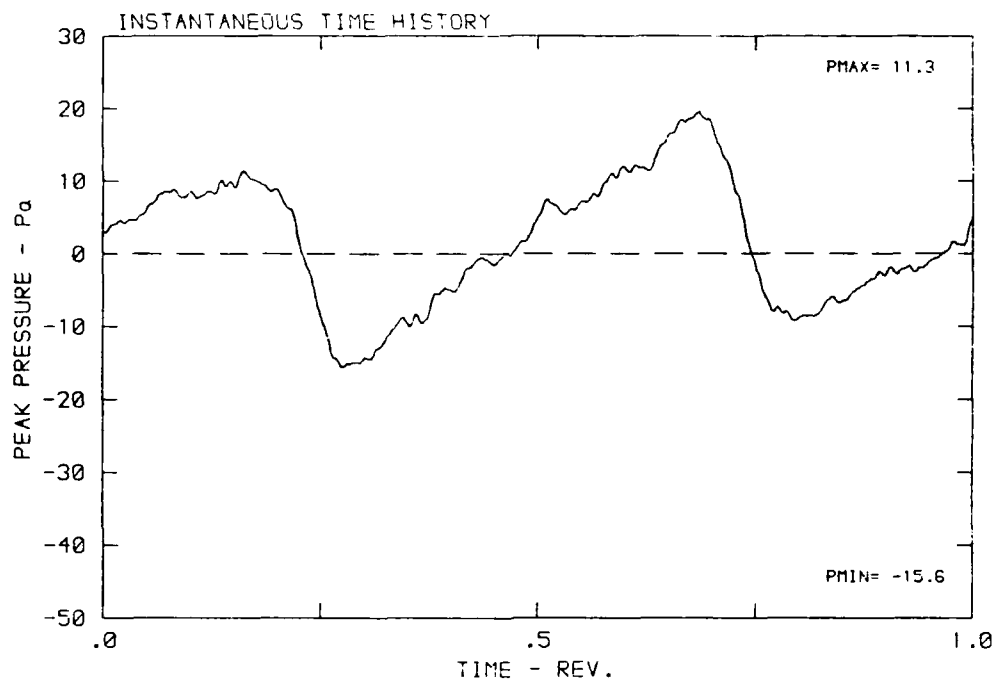
DATA POINT: LN-2 RUN: 155 MP: E

β : 19.9° NH: .7645 n: 2400 rpm vru: .202 ϕ : -3.8° T: 285.9 K



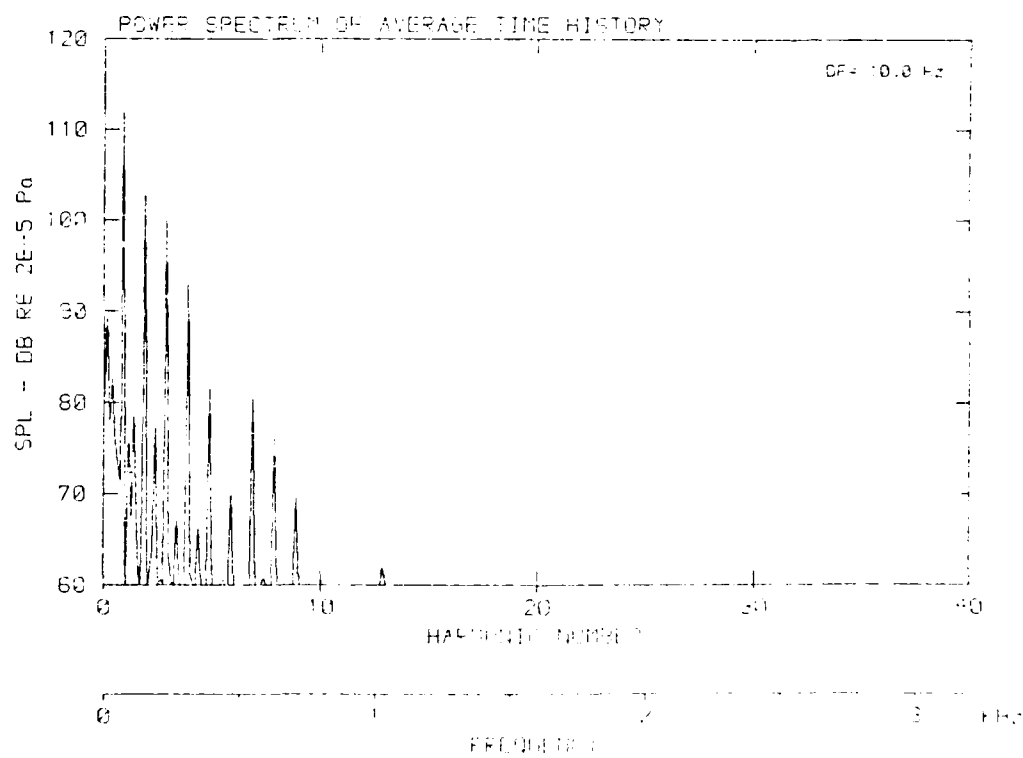
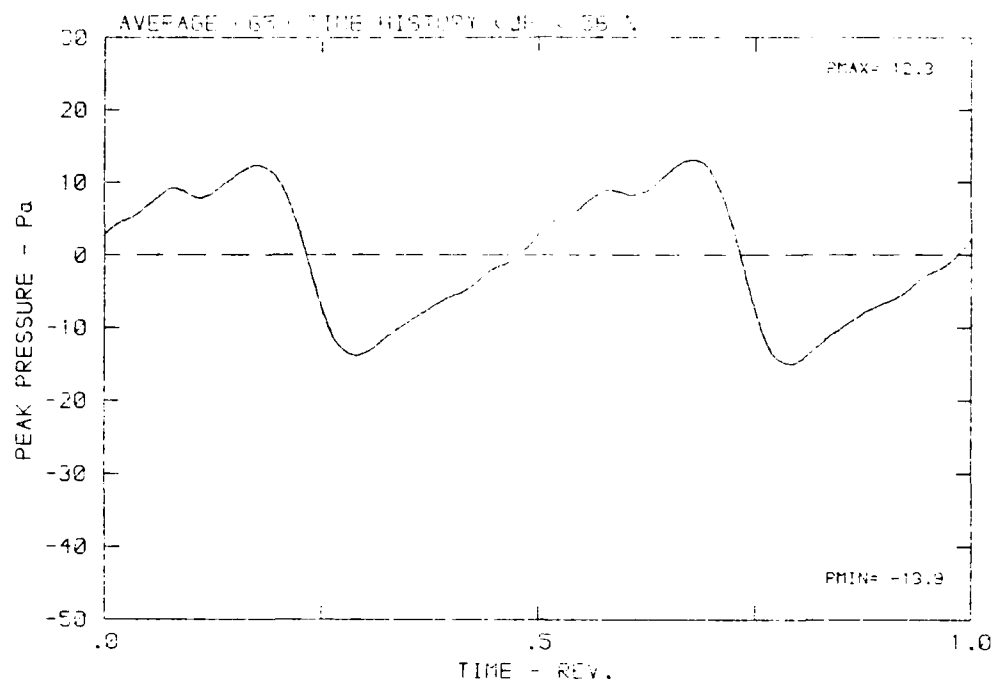
DATA POINT: LN-2 RUN: 155 MP: 7

β : 19.9° MH: .7645 n: 2400 rpm v/u : .202 ϕ : -3.8° T: 289.9 K



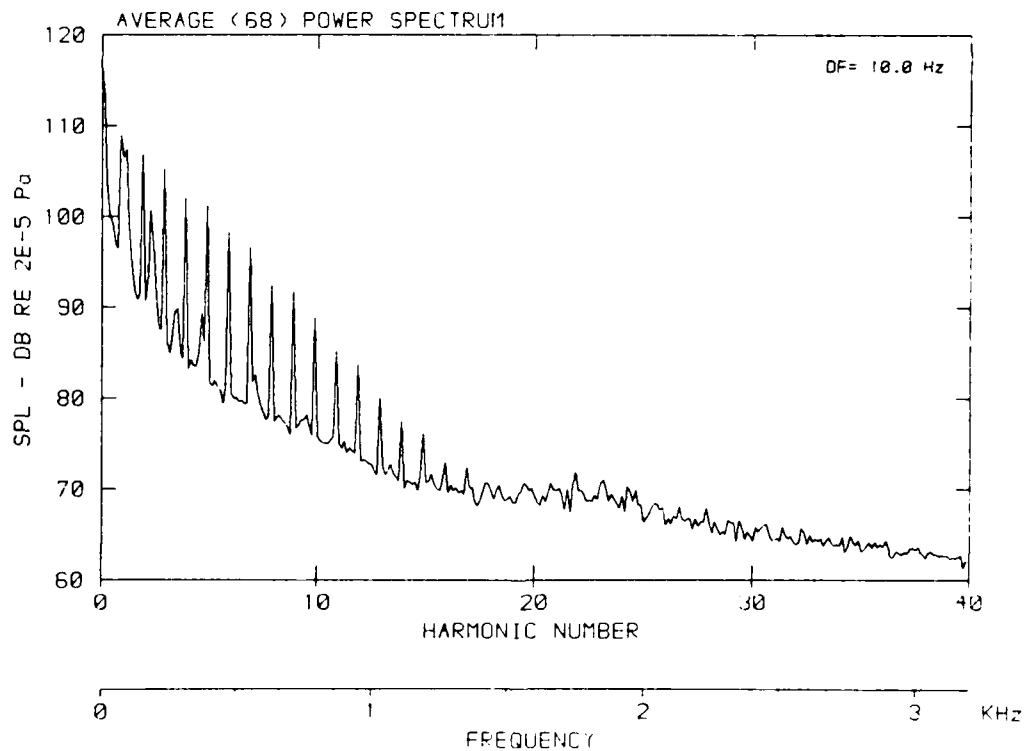
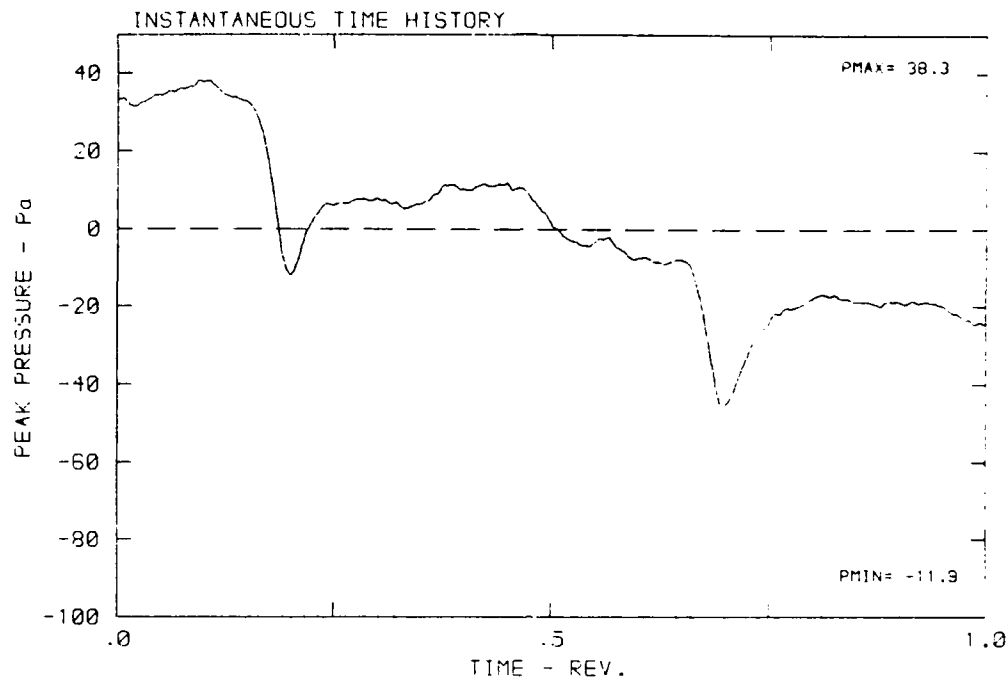
DATA PRINTED FROM ANALYSIS

β : 19.9° MH: .7645 n: 2400 rpm γ : .202 ϕ : 0.8° τ : 263.3



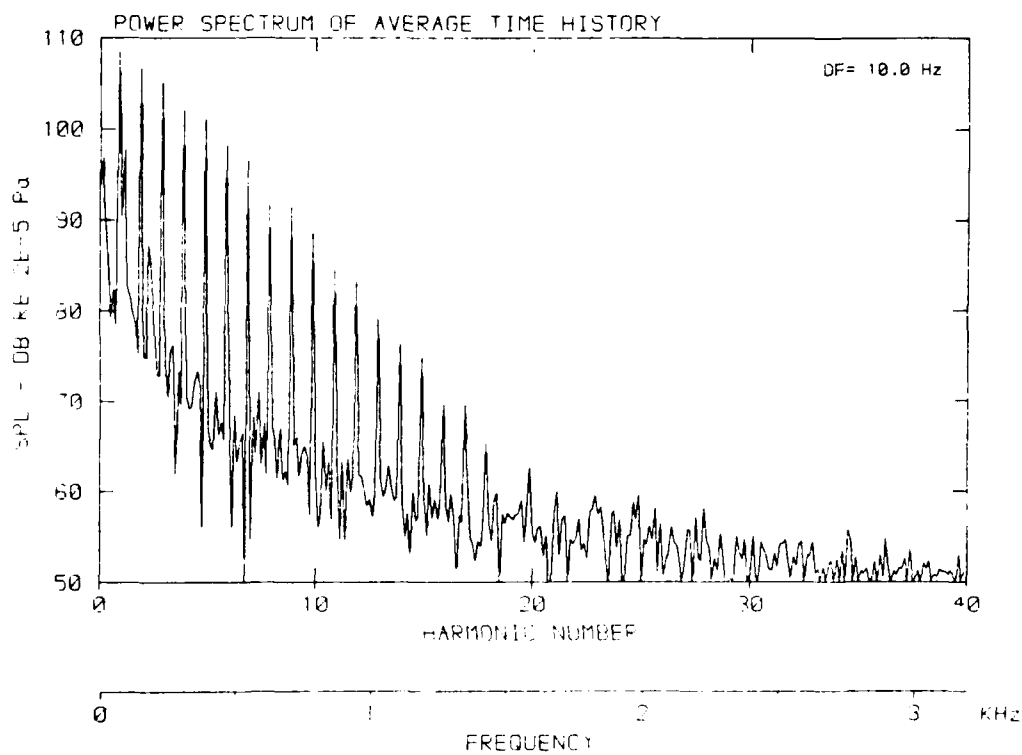
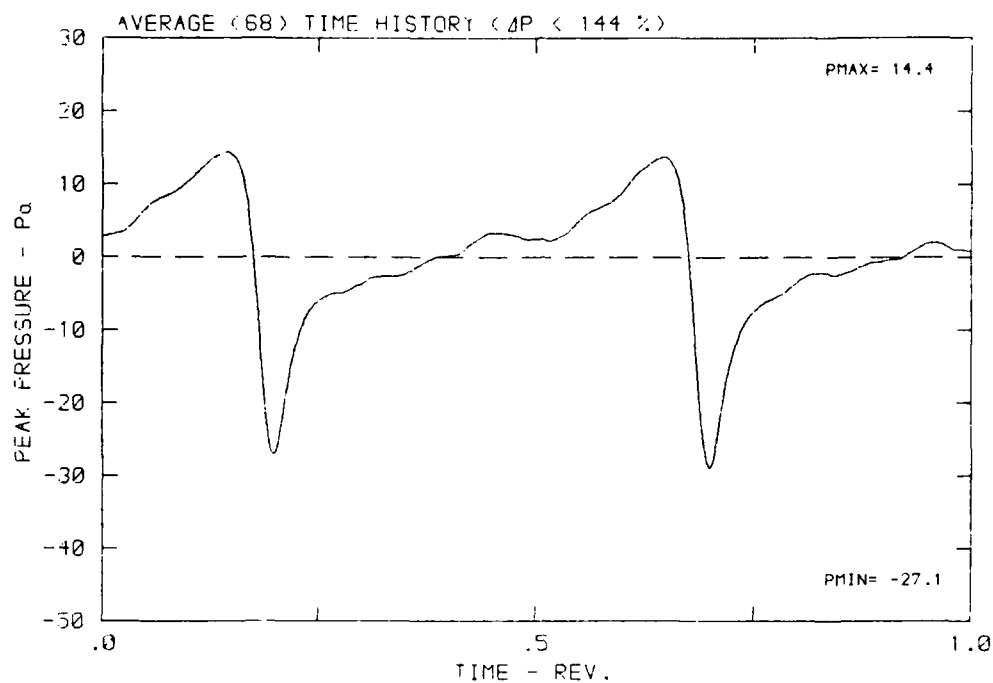
DATA POINT: LN-2 RUN: 155 MP: 8

β : 19.9° MH: .7645 n: 2400 rpm v/u : .202 ϕ : -3.3° T: 288.3 K



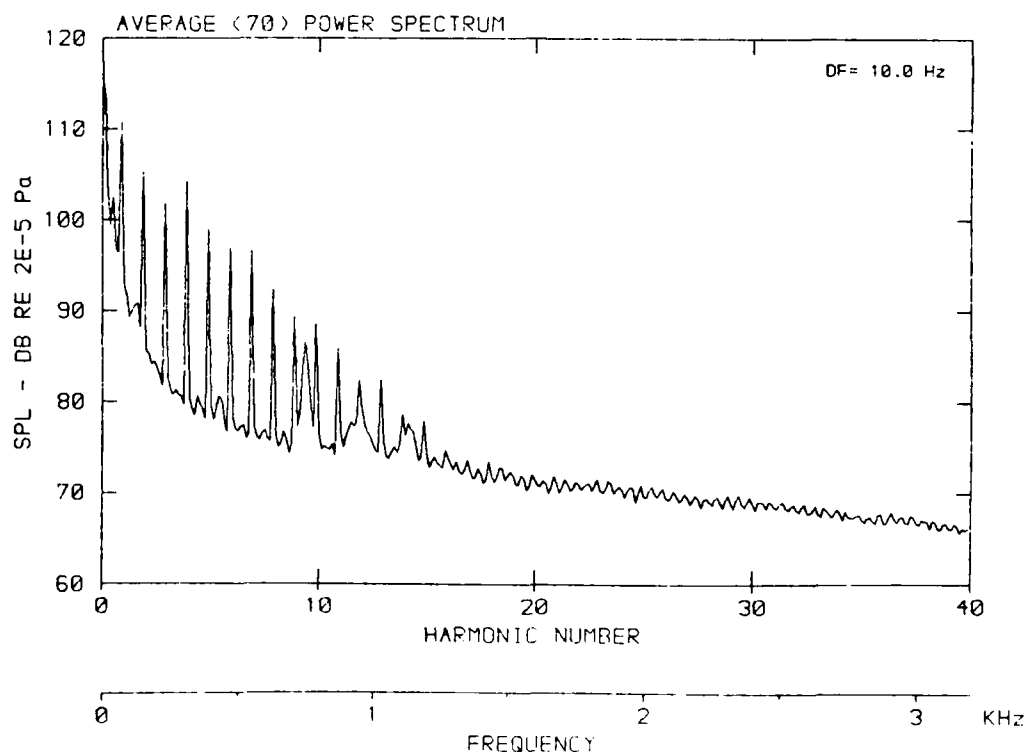
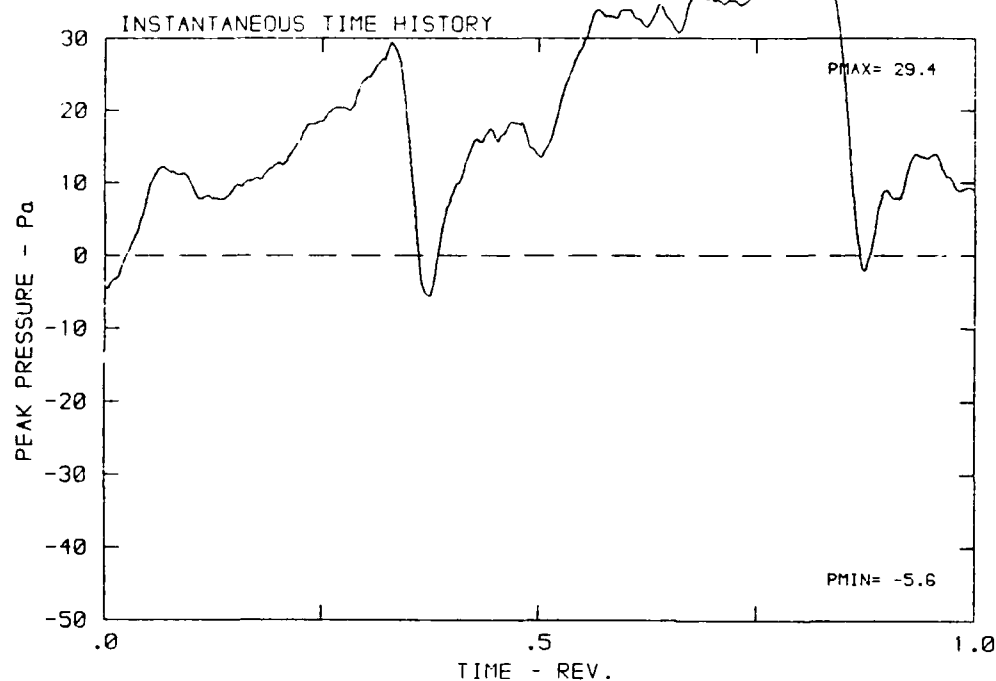
DATA POINT: LN-2 RUN: 155 MP: 8

β : 19.9° MH: .7645 n: 2400 rpm v/u: .202 ϕ : -3.8° Γ : 288.9 K



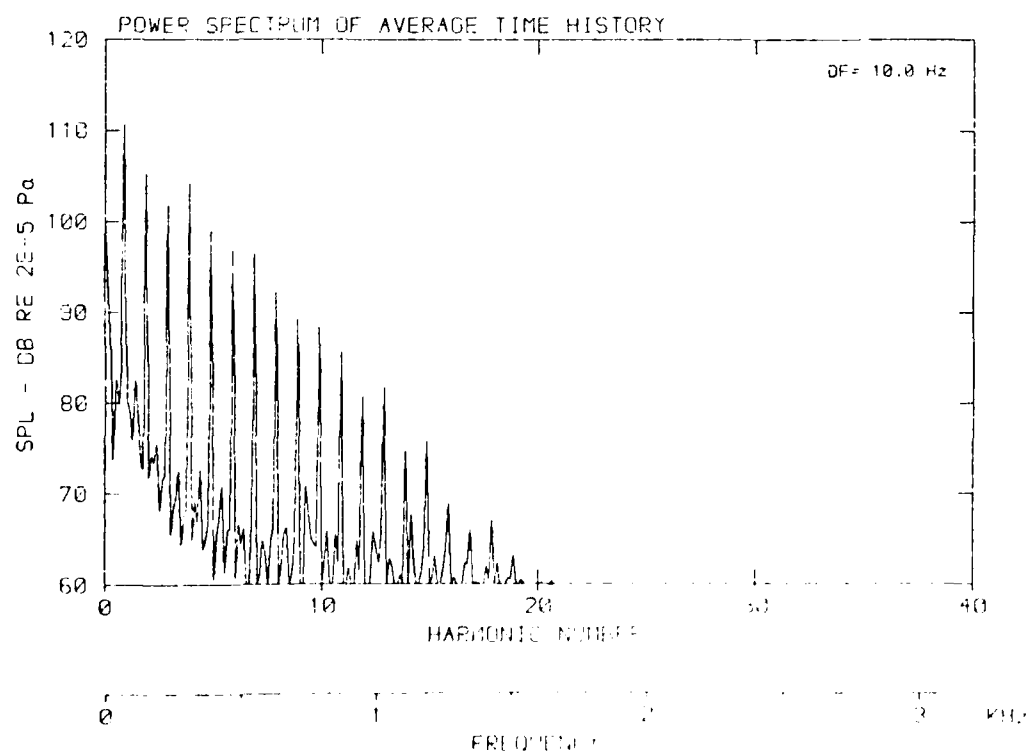
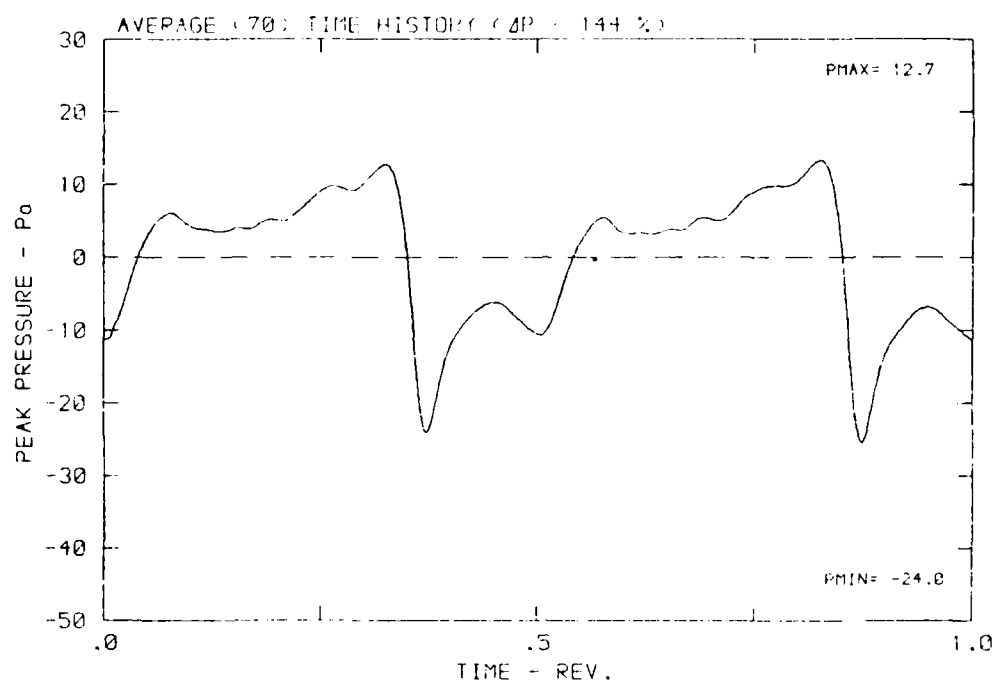
DATA POINT: LN-2 RUN: 155 MP: 2

β : 19.9° MH: .7645 n: 2400 rpm v/u: .202 ϕ : -3.8° T: 298.9 K



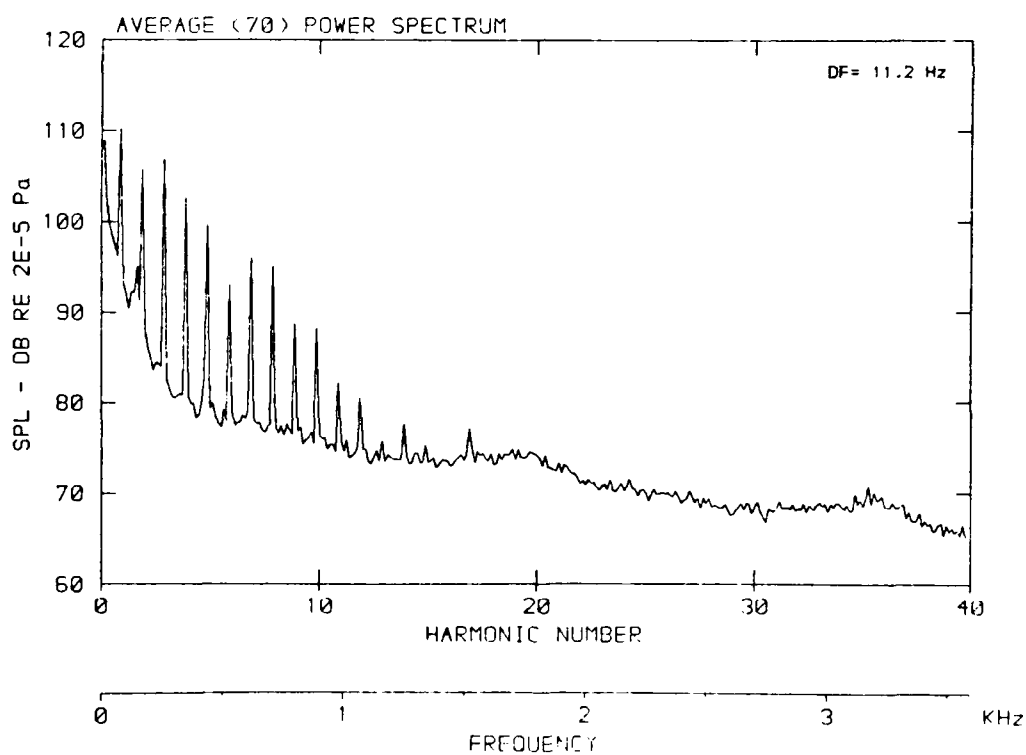
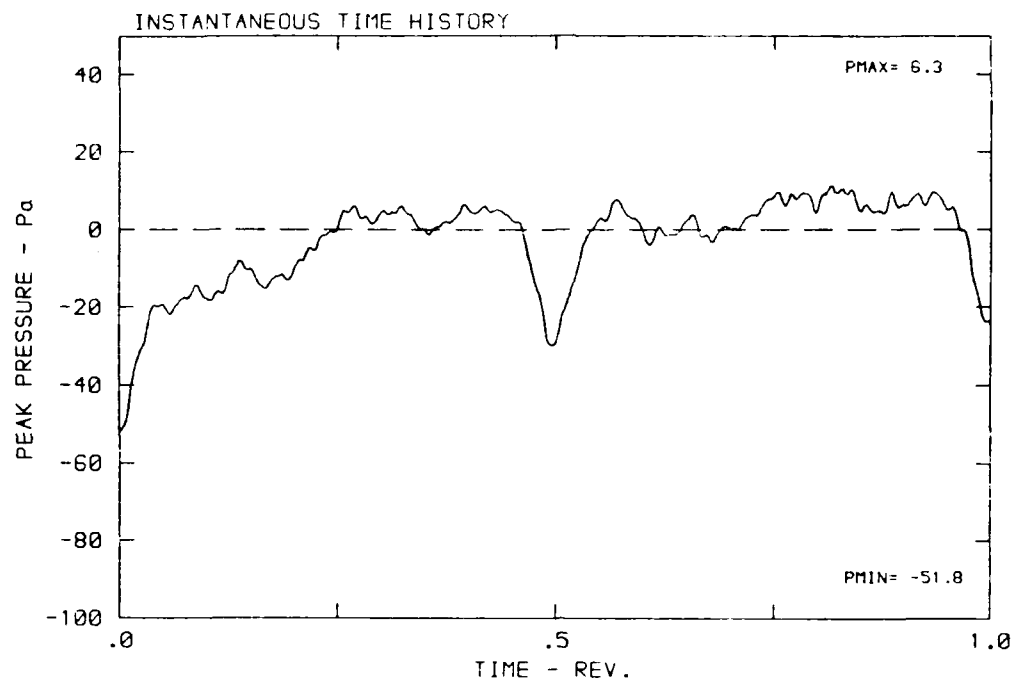
DATA POINT: LN-2 RUN: 155 MP: 3

β : 19.9° MH: .7645 n: 2400 rpm v_{tu} : .202 ϕ : -3.8° T: 288.9 K



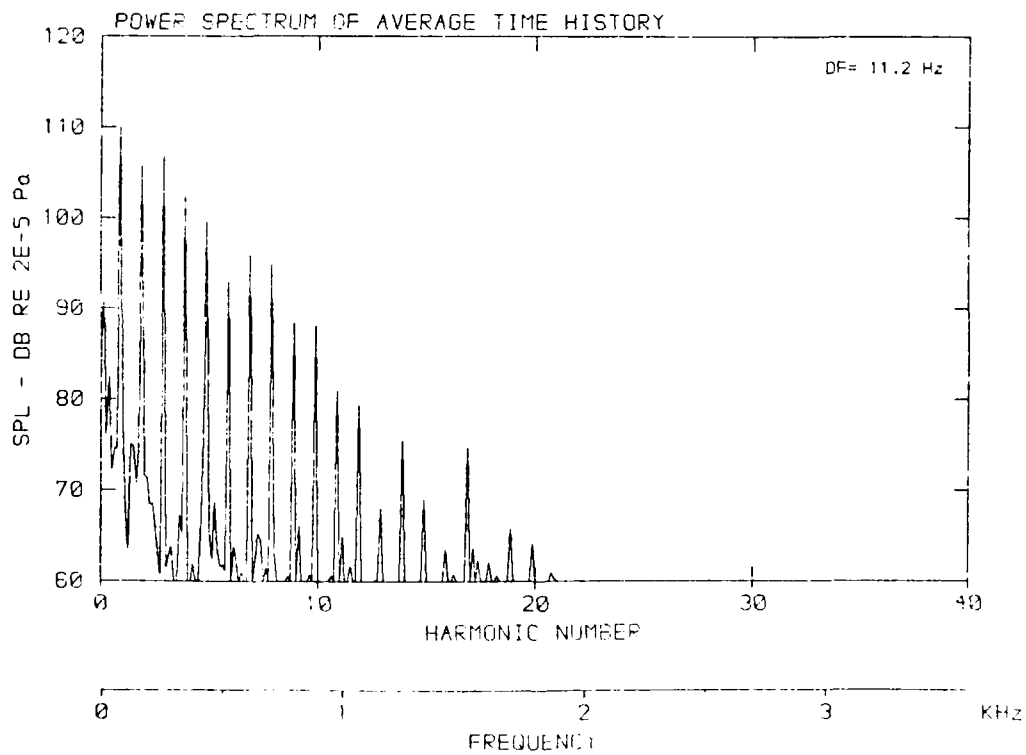
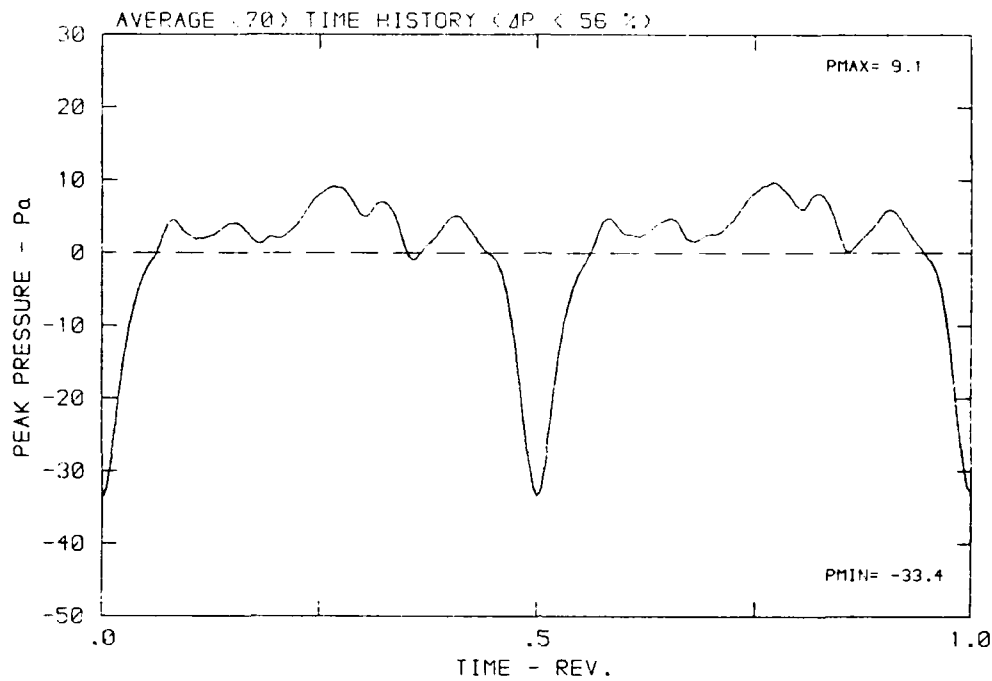
DATA POINT: LN-3 RUN: 156 MP: 1

β : 19.9° MH: .8727 n: 2700 rpm v/u : .263 ϕ : -3.8° T: 288.3 K



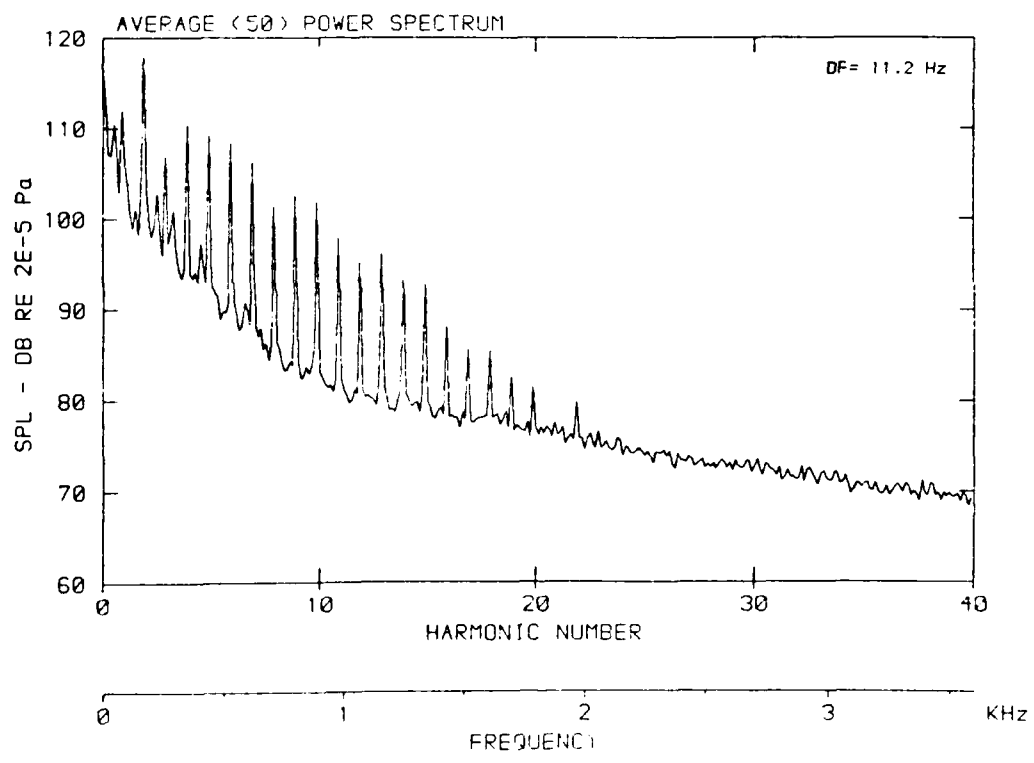
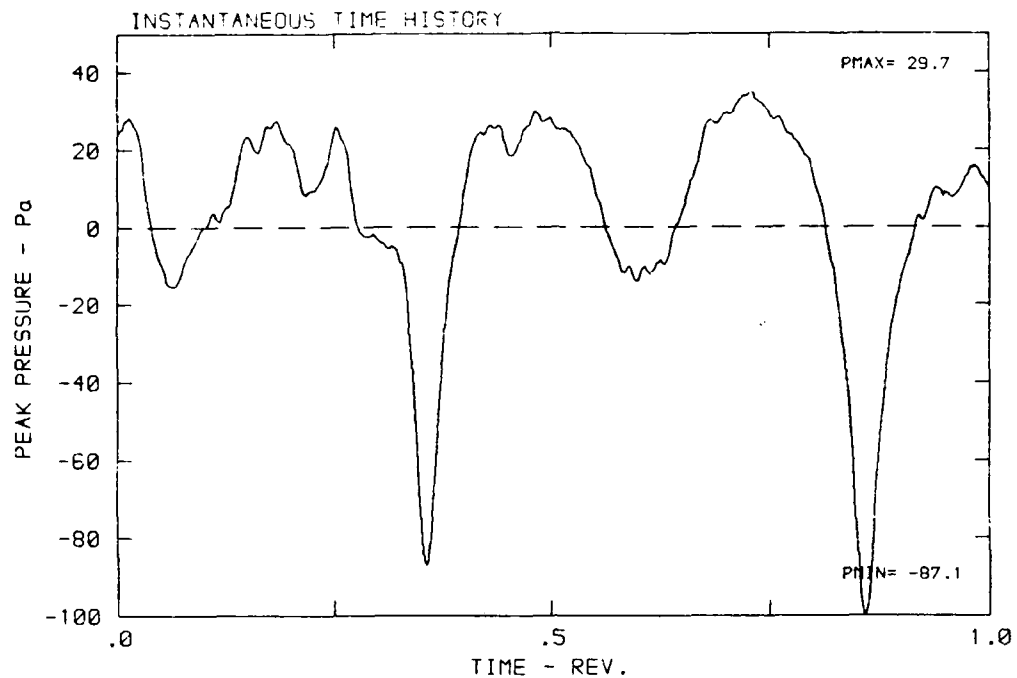
DATA POINT: LN-3 RUN: 156 MP: 1

β : 19.9° MH: .8727 n: 2700 rpm v/u : .268 ϕ : -3.8° T: 288.9 K



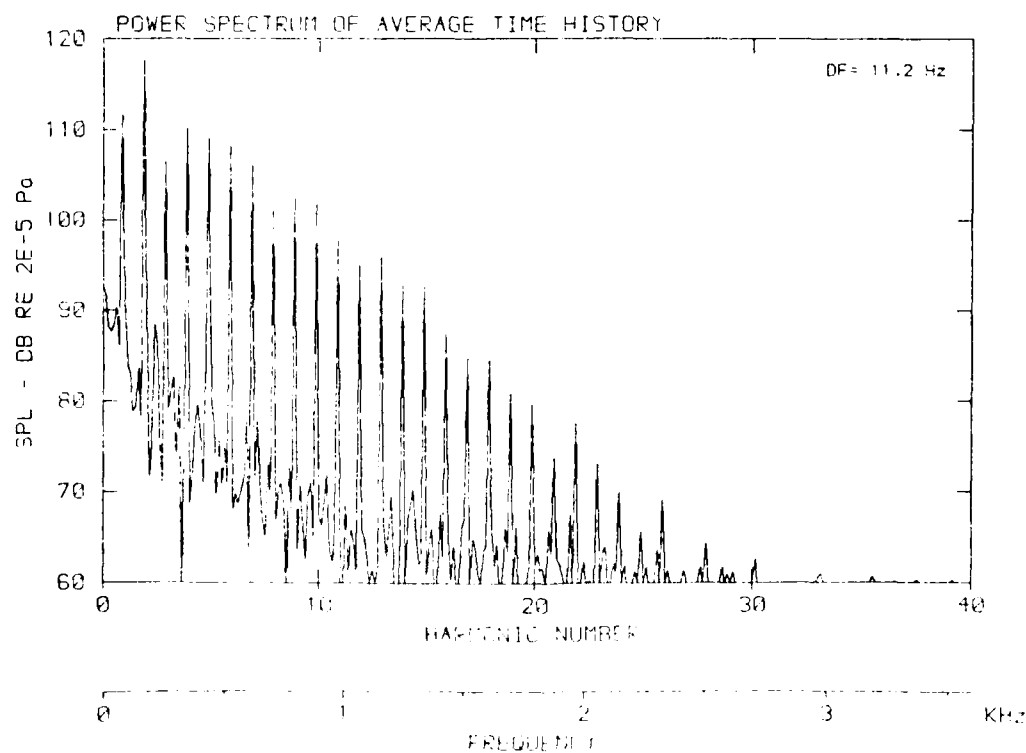
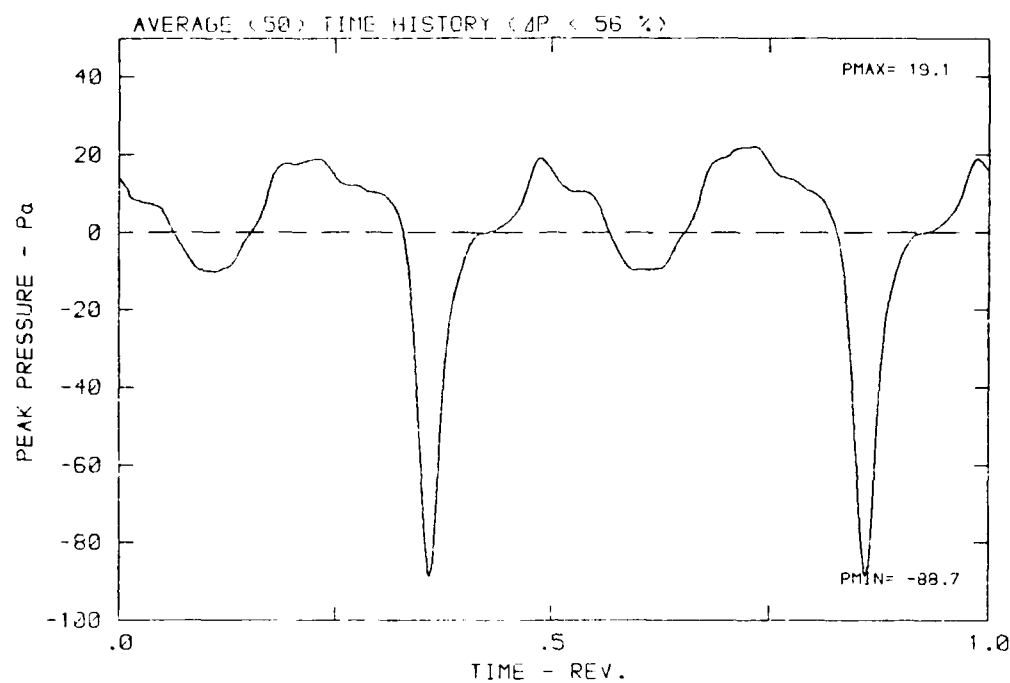
DATA POINT: LN-3 RUN: 156 MF: 2

β : 19.9° MH: .8727 n: 2700 rpm v/u : .268 ϕ : -3.8° T: 288.9 K



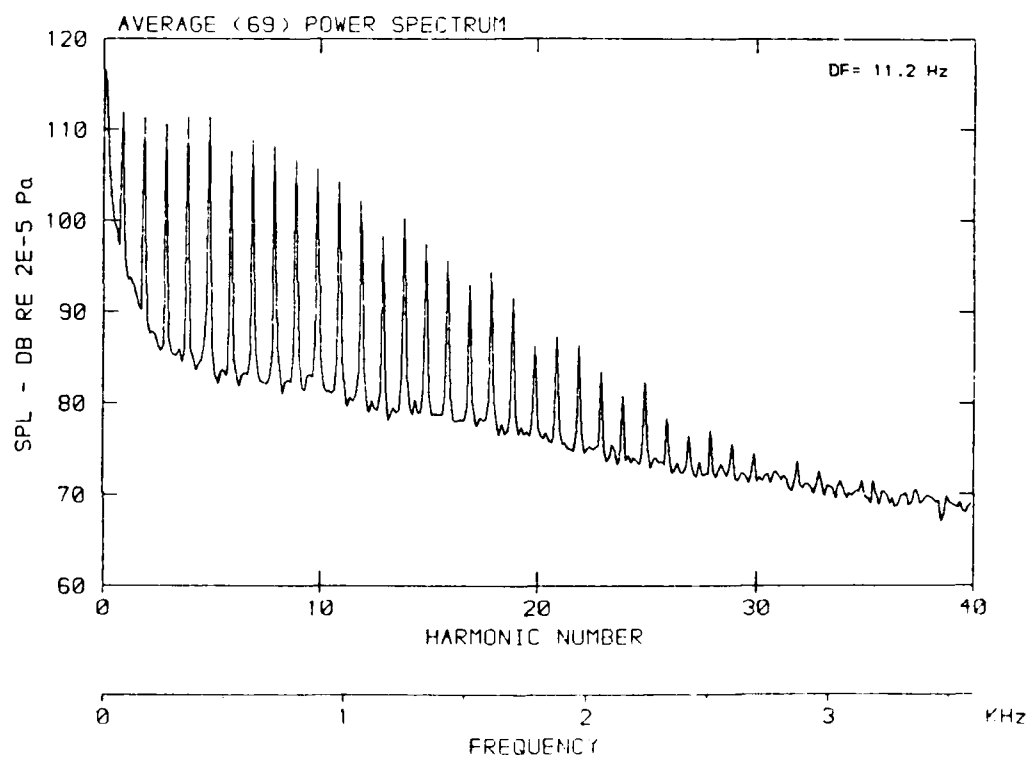
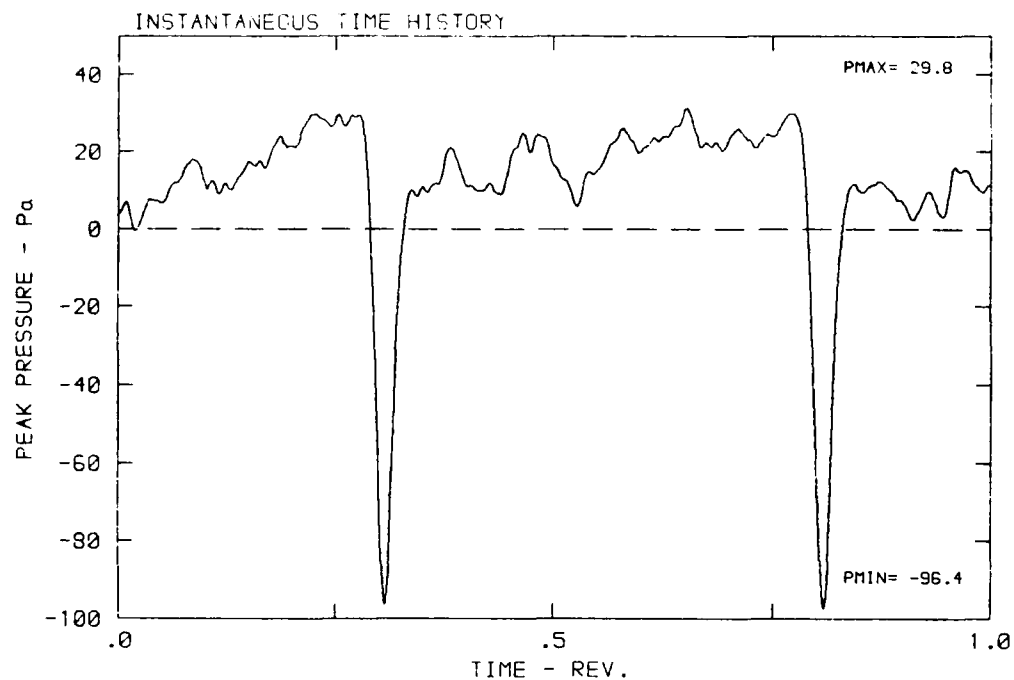
DATA POINT: LN-3 RUN: 156 MP: 2

β : 19.9° MH: .8727 n: 2700 rpm v/u: .268 ϕ : -3.8° T: 288.9 K



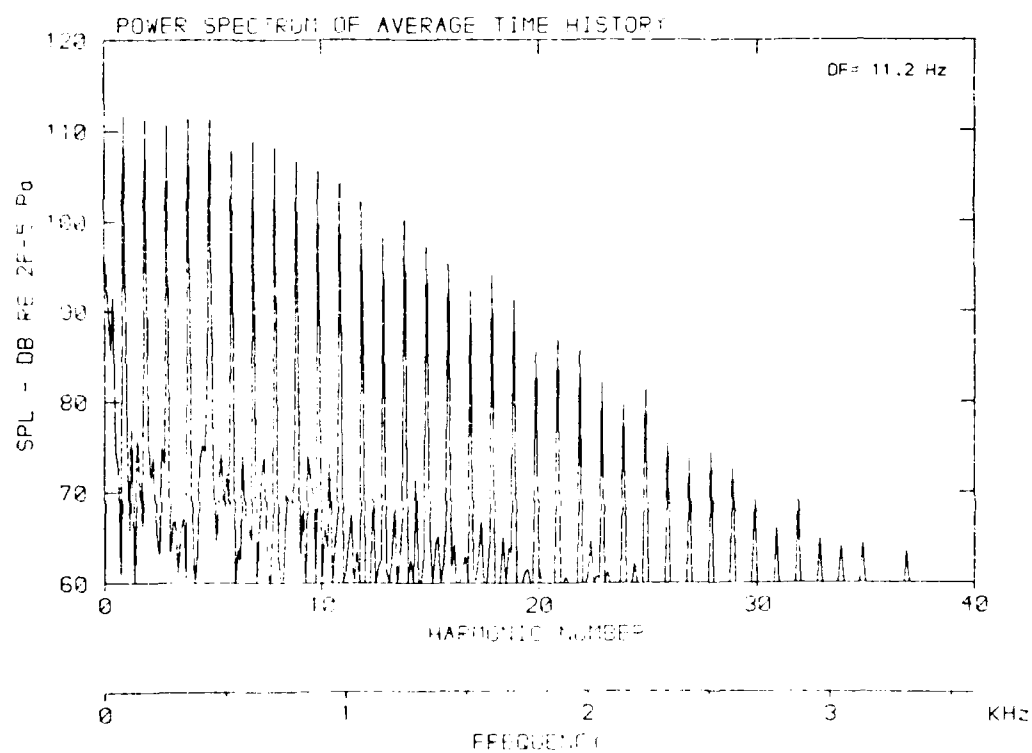
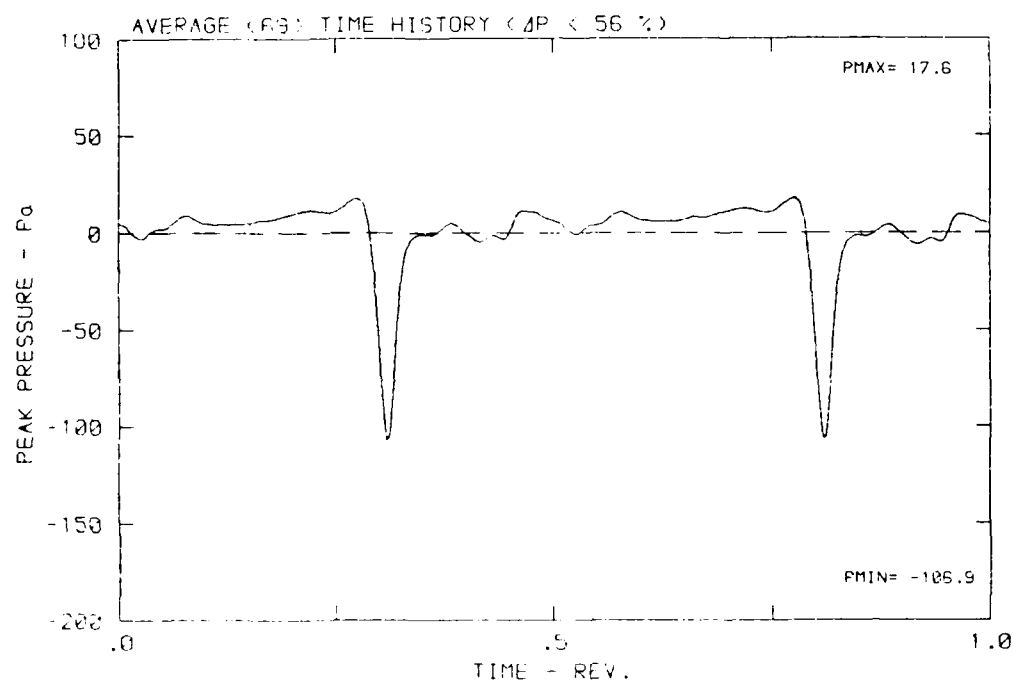
DATA POINT: LN-3 RUN: 156 MF: 3

β : 19.9° MH: .8727 n: 2700 rpm v/u : .268 ϕ : -3.9° T: 286.9 K



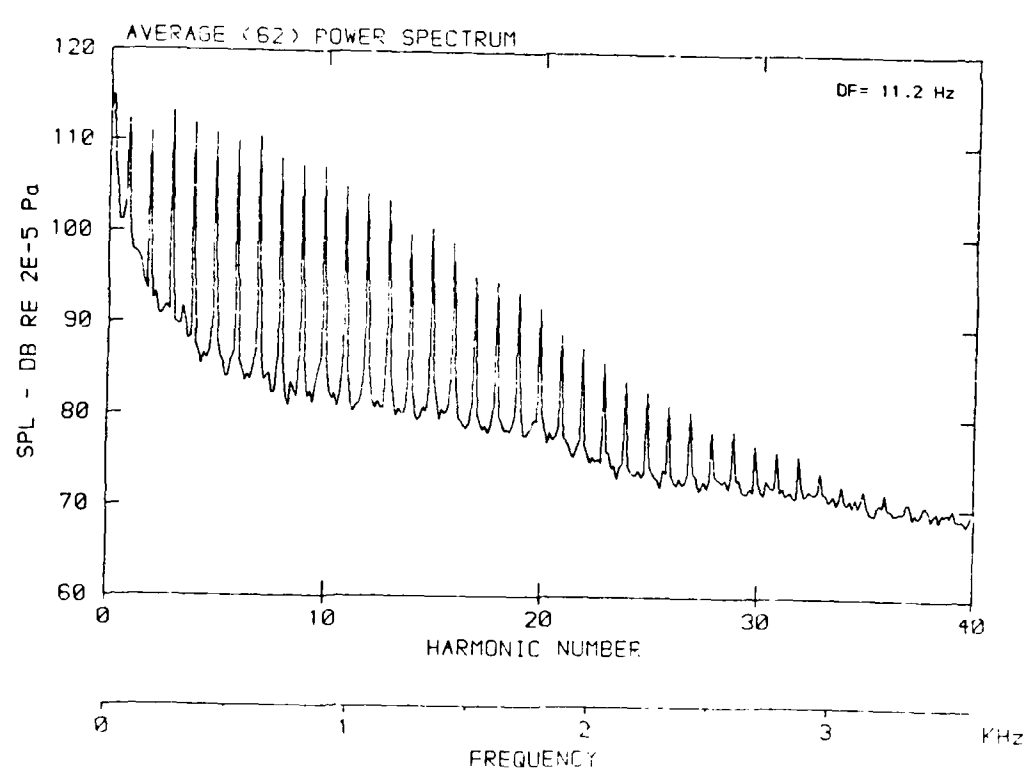
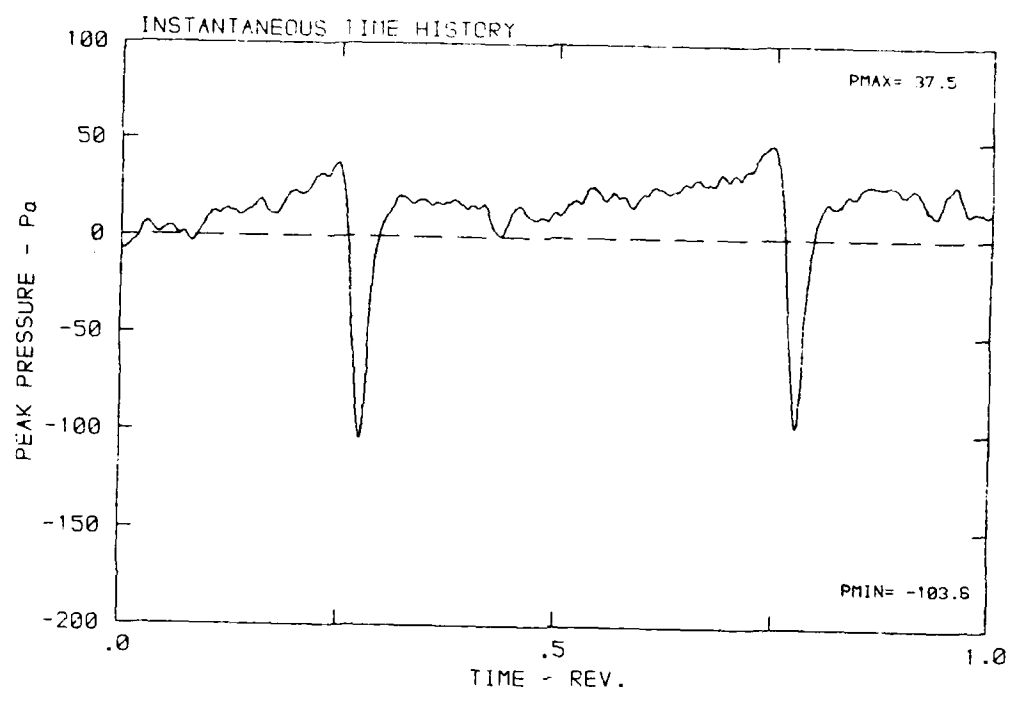
DATA POINT: LN-3 RUN: 158 MP: 3

β : 19.9° MH: .8727 n: 2700 rpm ν/ω : .268 ϕ : -3.8° T: 288.9 K



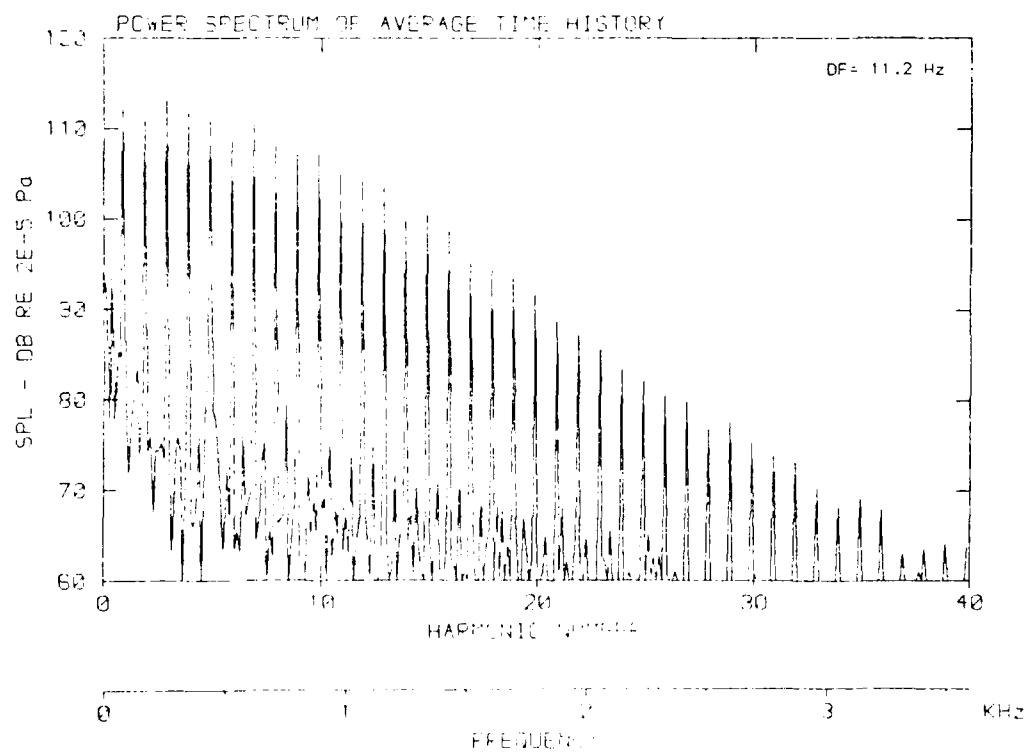
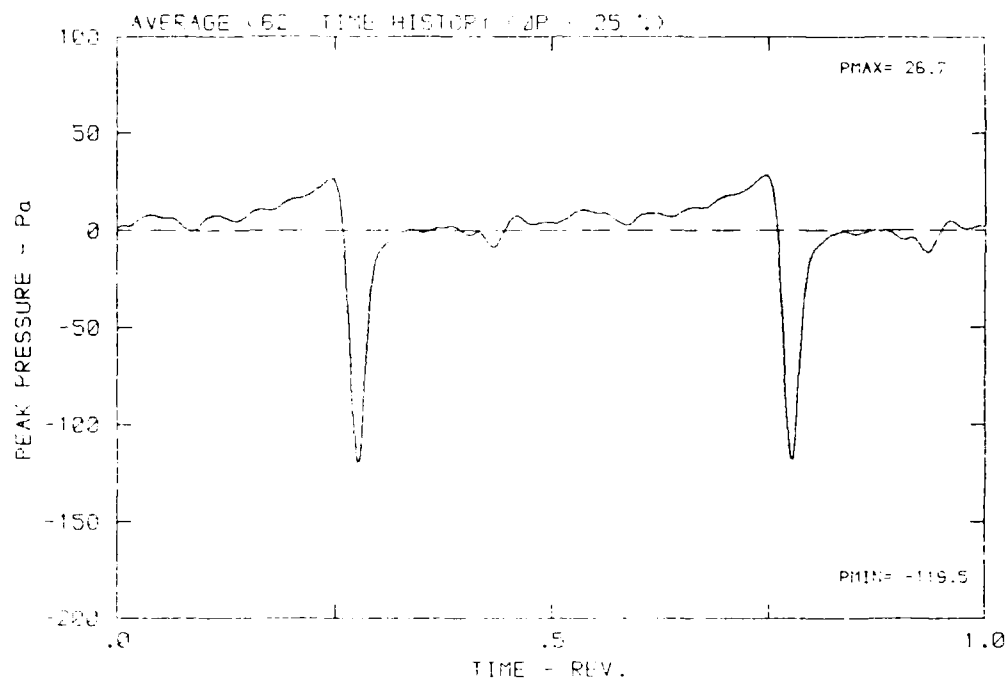
DATA POINT: LN-3 RUN: 155 MP: 3

β : 19.9° MH: .8727 n: 2700 rpm v/u : .165 ϕ : -3.3° T: 288.3 K



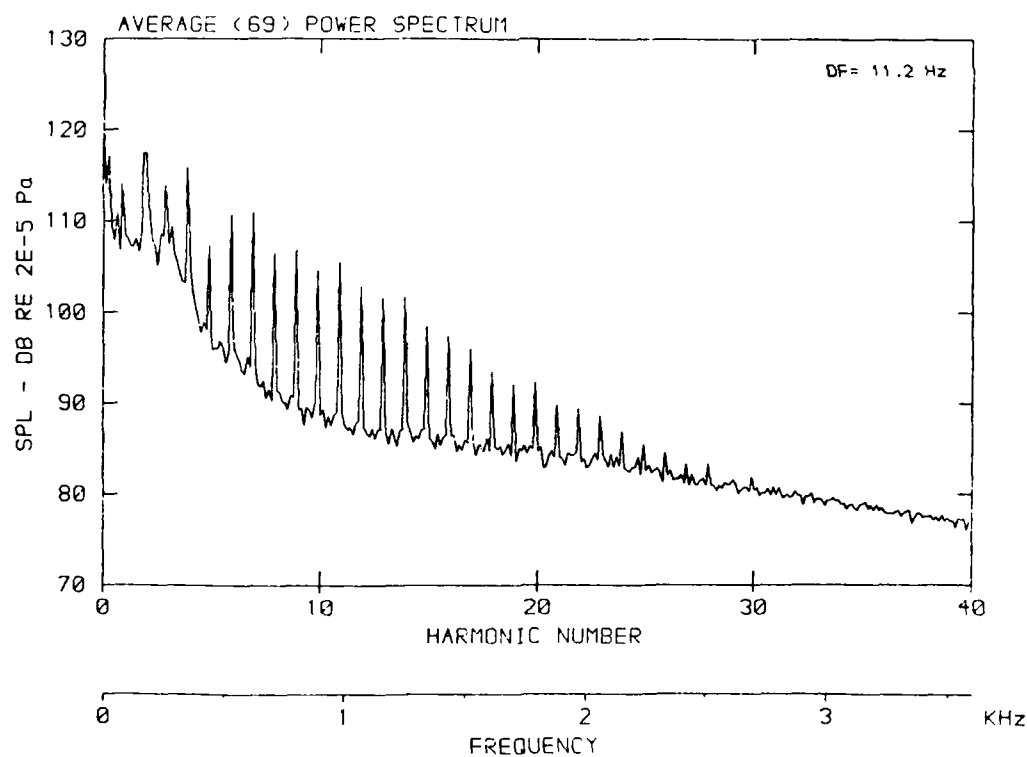
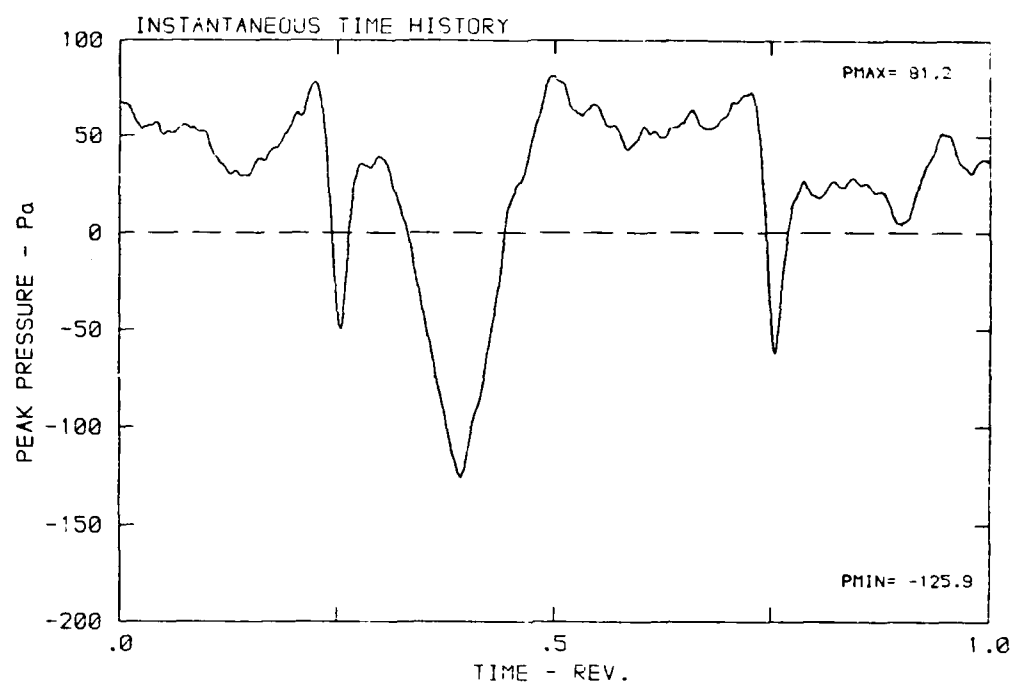
DATA POINT: LN-3 RUN: 156 NF: 4

β : 19.9° MH: .8727 n: 2700 rpm vru: .268 ϕ : -3.6° T: 258.9 s



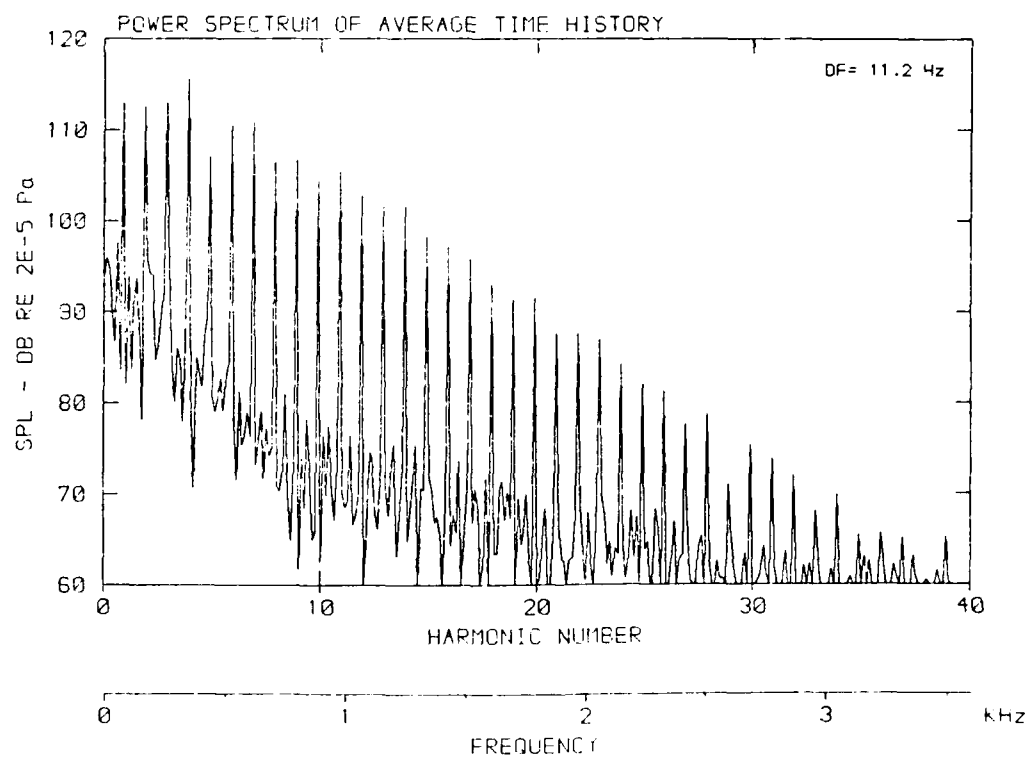
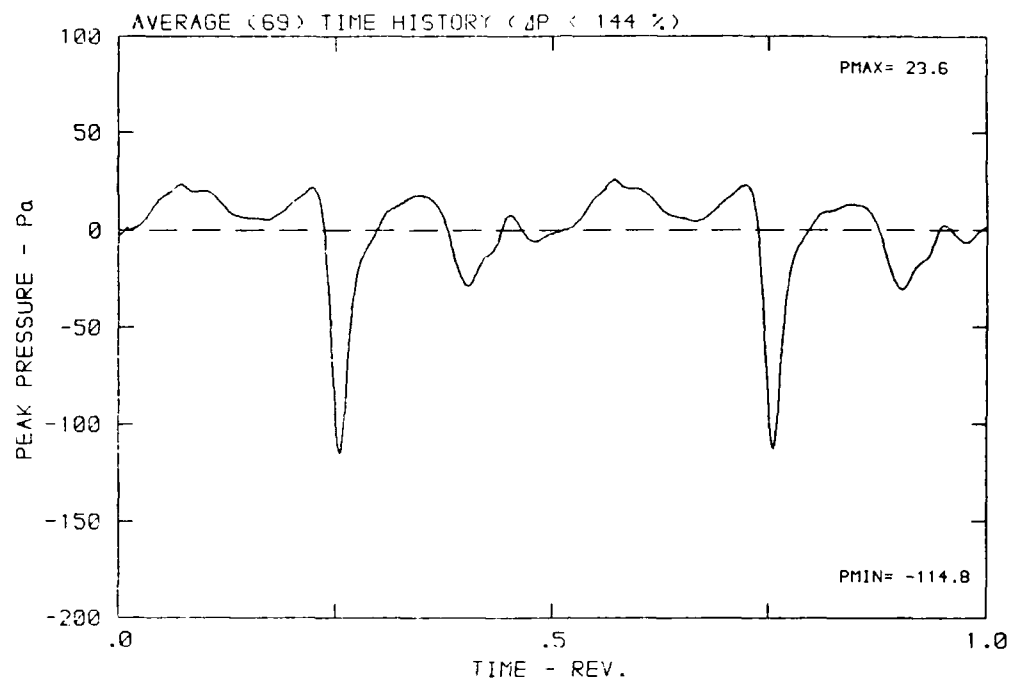
DATA POINT: LN-3 RUN: 156 MP: E

β : 19.9° MH: .8727 n: 2700 rpm v/u: .268 ϕ : -3.8° T: 288.9 K



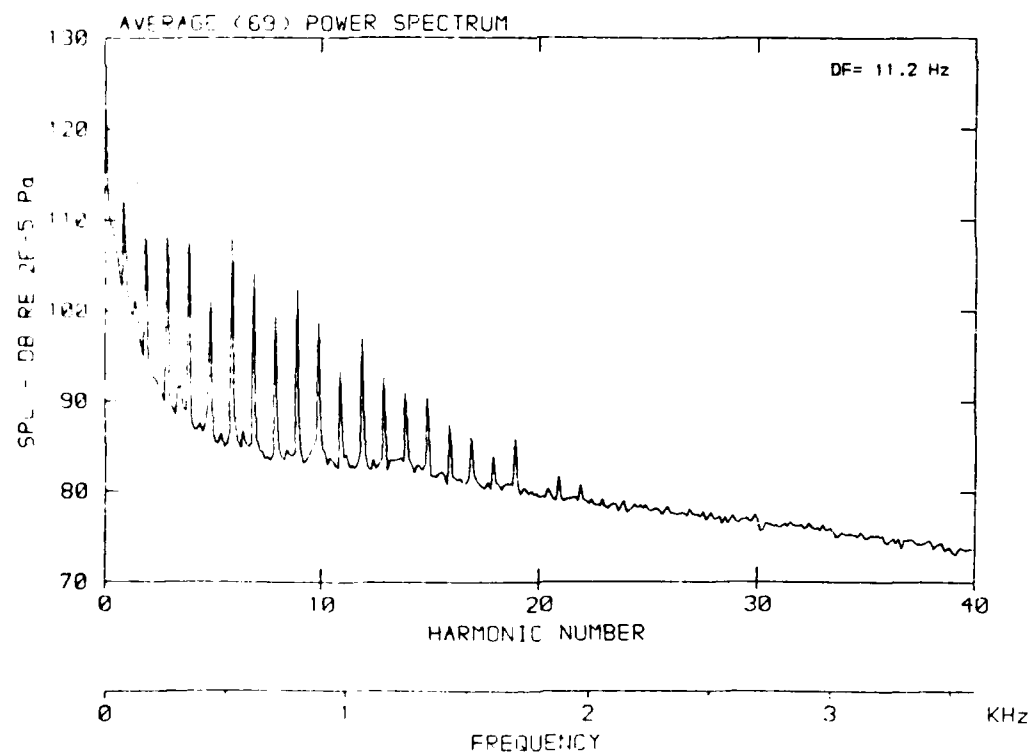
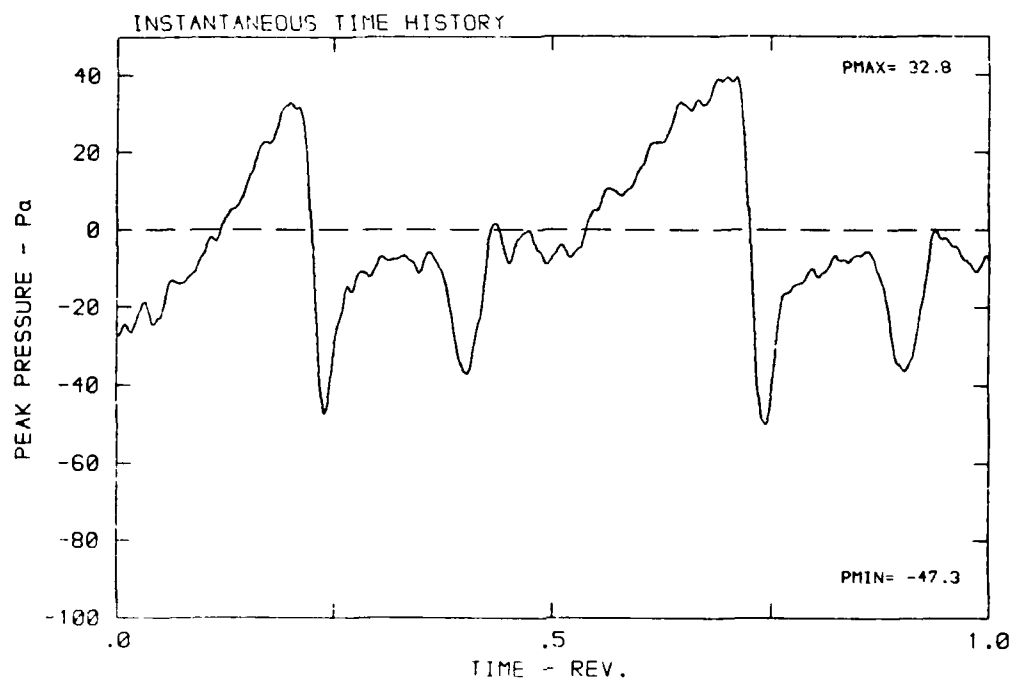
DATA POINT: LN-3 RUN: 156 MP: 5

β : 19.9° MH: .8727 n: 2700 rpm v_{tu} : .268 ϕ : -3.8° T: 288.9 K



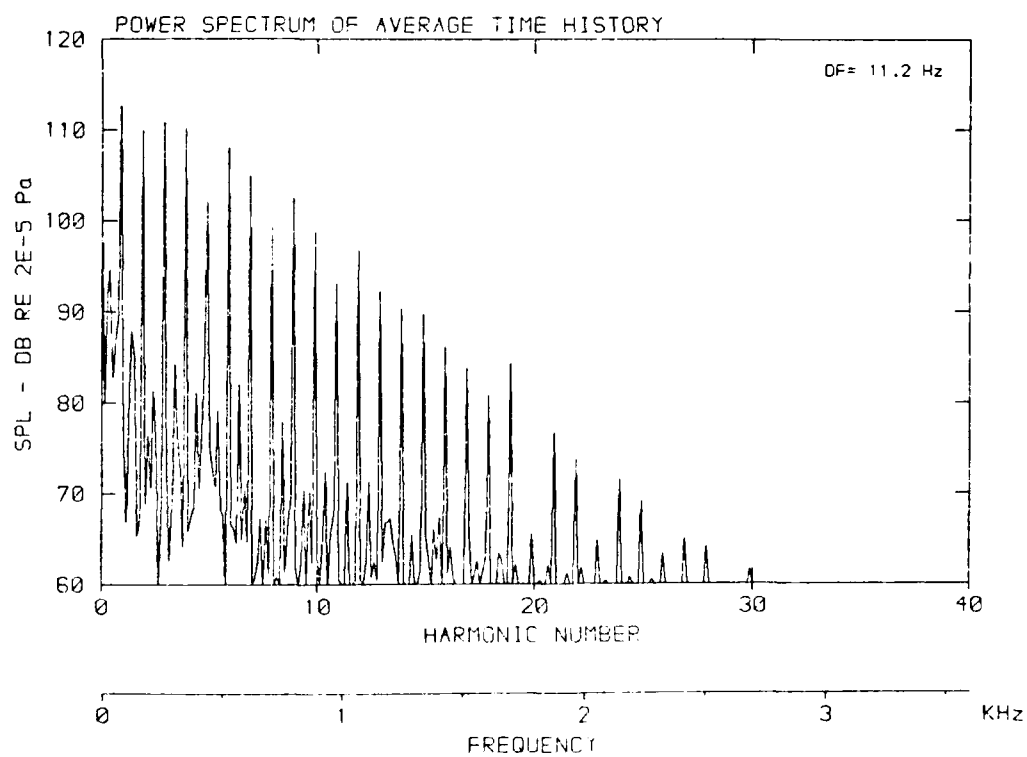
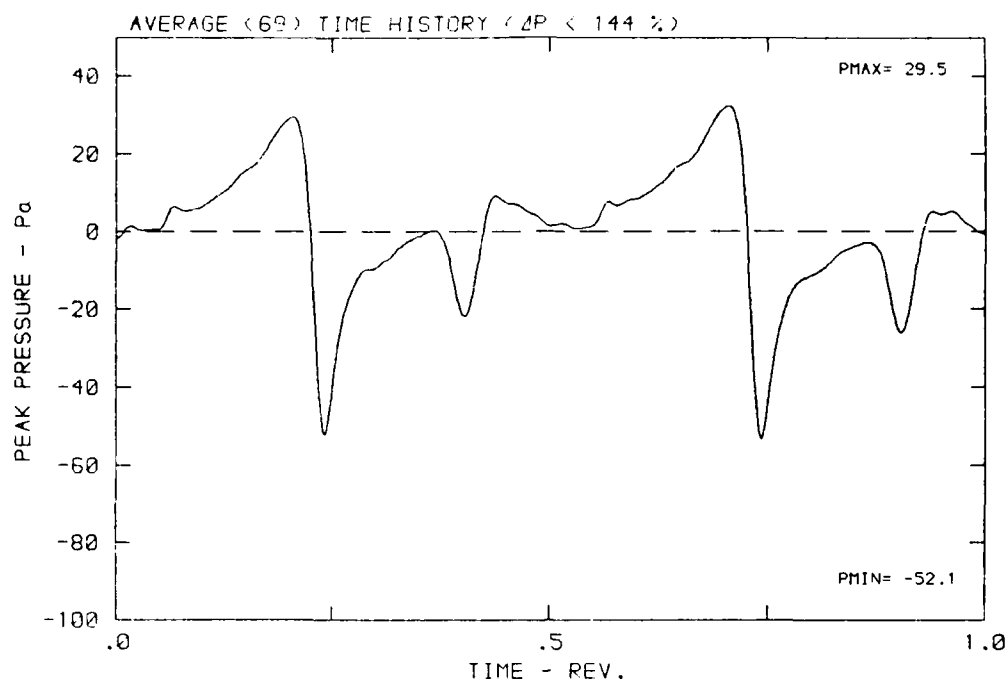
DATA POINT: LN-3 RUN: 156 MF: 6

β : 19.9° MH: .8727 n: 2700 rpm v/u : .263 ϕ : -3.8° T: 283.9 K



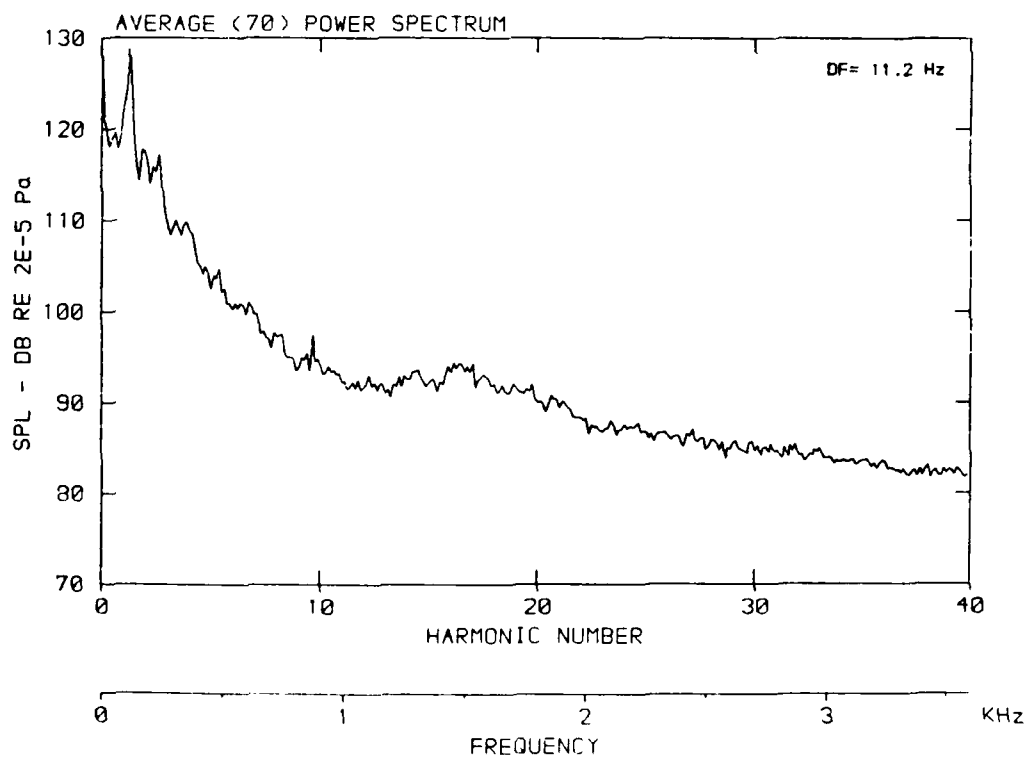
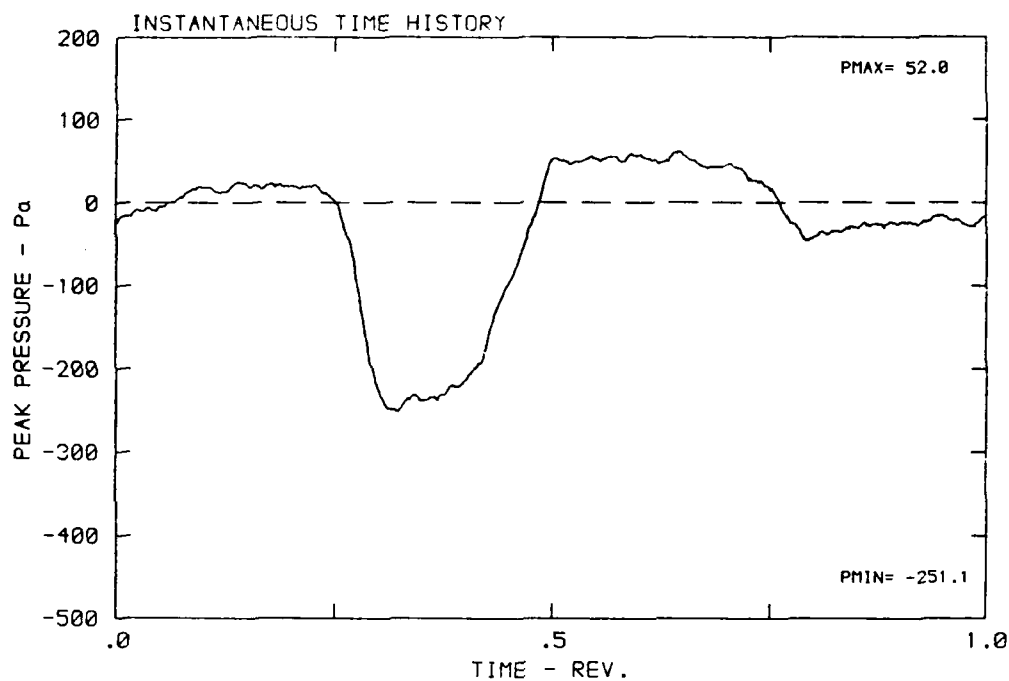
DATA POINT: LN-3 RUN: 156 MP: 6

β : 19.9° MH: .8727 n: 2700 rpm v/u: .268 ϕ : -3.8° T: 288.9 K



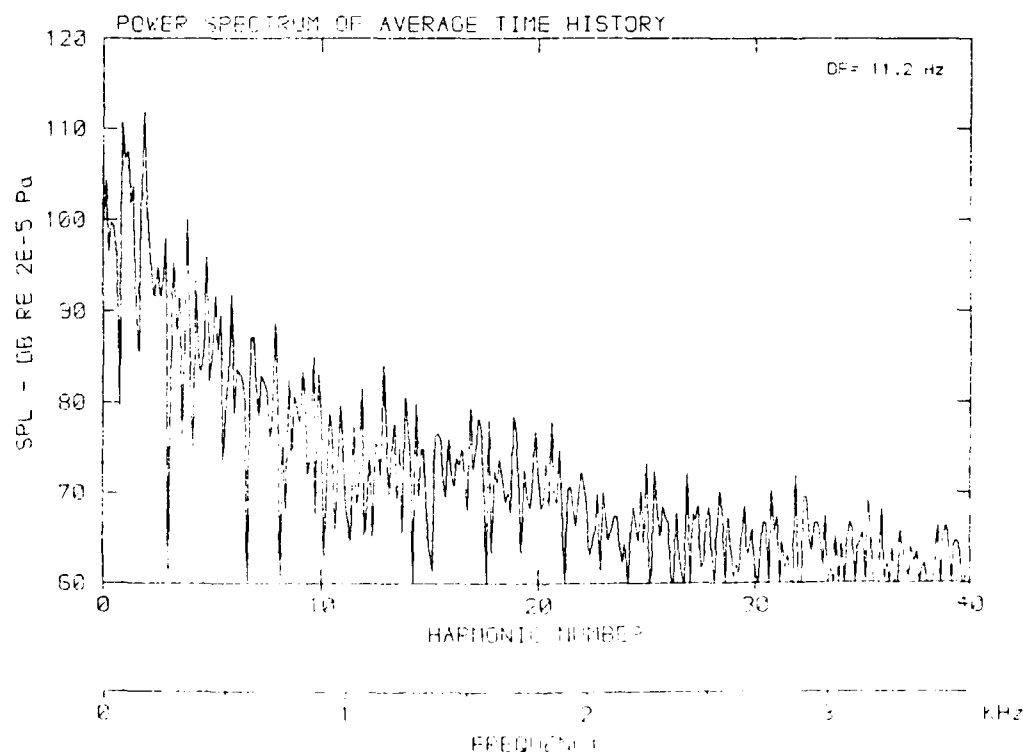
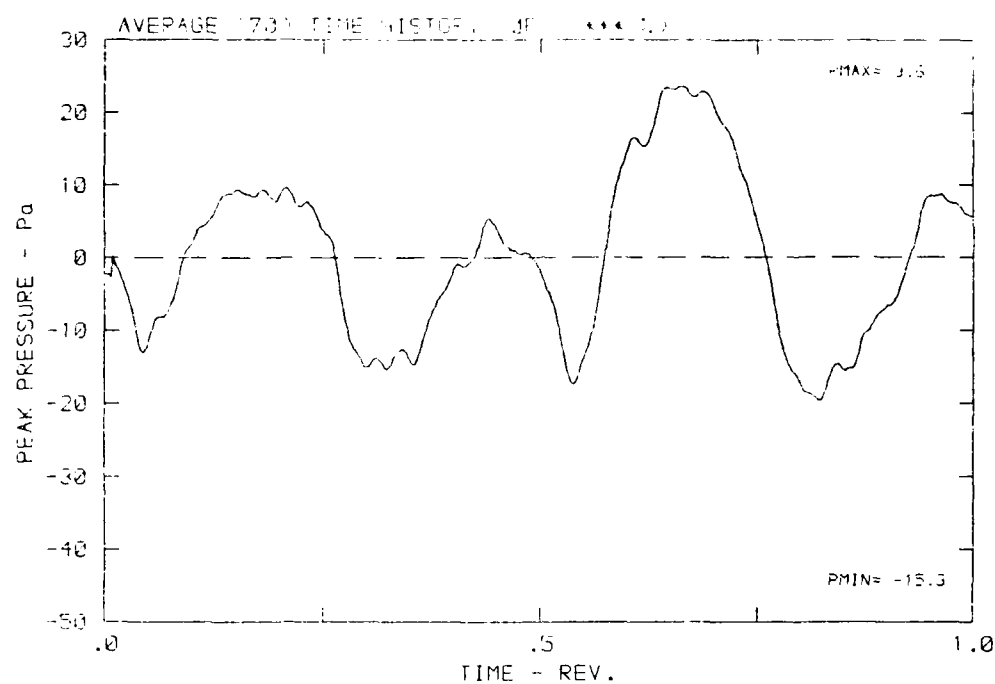
DATA POINT: LN-3 RUN: 156 MP: 7

β : 19.9° MH: .9727 n: 2700 rpm v/u : .268 ϕ : -3.8° T: 288.9 K



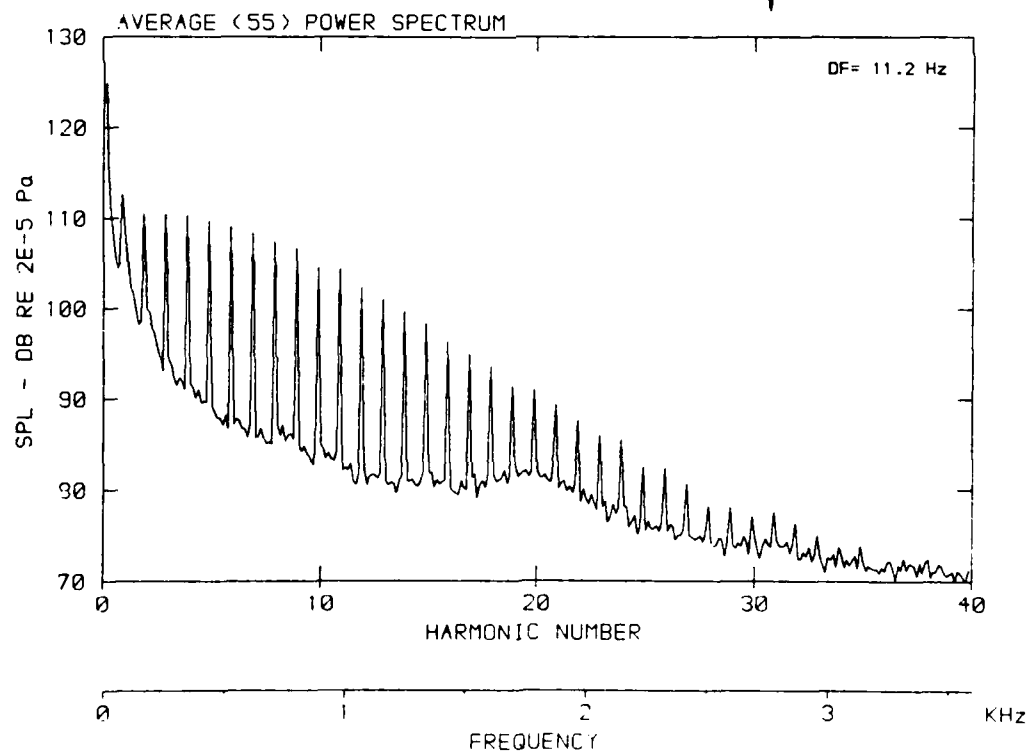
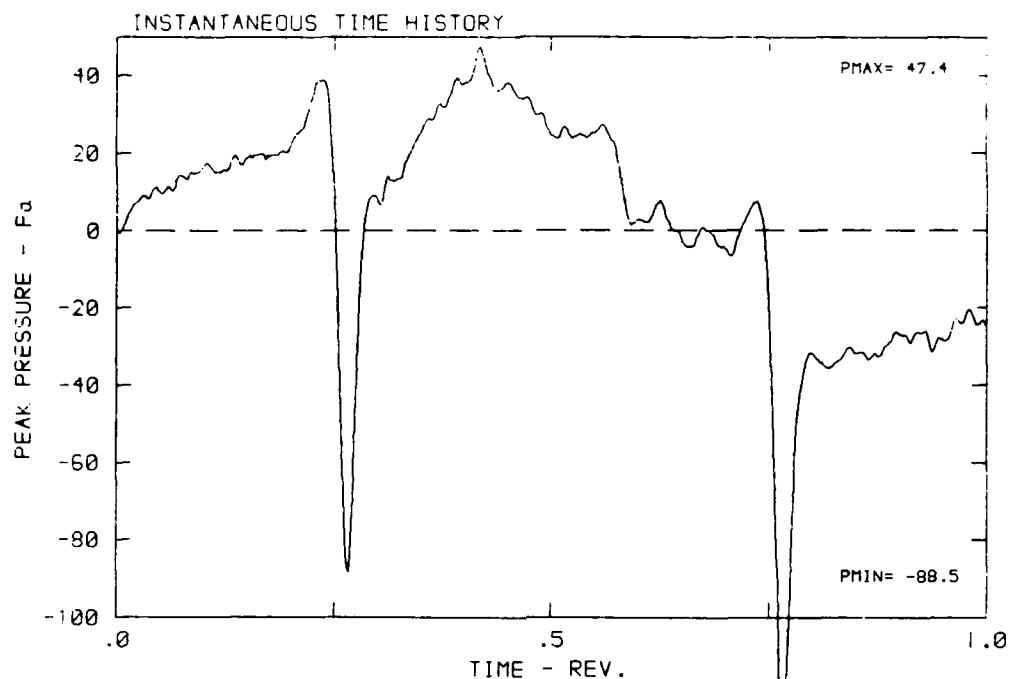
DATA POINTS: 10000 10000 10000 10000 10000

β : 19.9° MH: .6717 R: 2700 mm θ : .256 ϕ : -3.6° T: 263.3



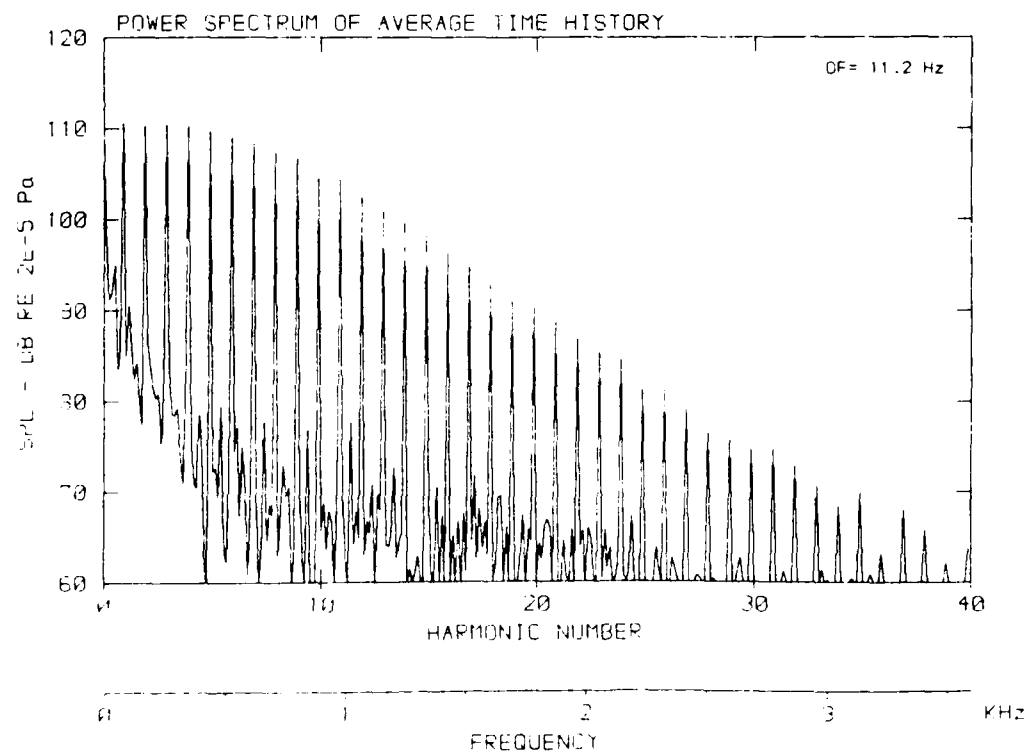
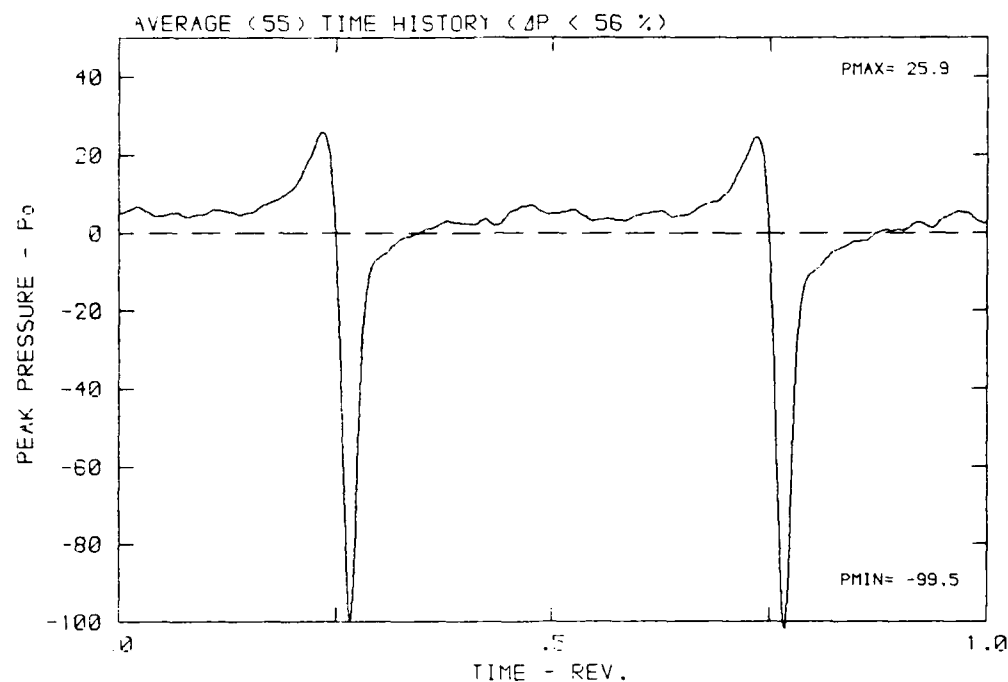
DATA POINT: LN-3 PUN: 156 MP: 3

β : 19.9° MH: .8727 n: 2700 rpm ν : .266 ϕ : -3.3° τ : 288.3



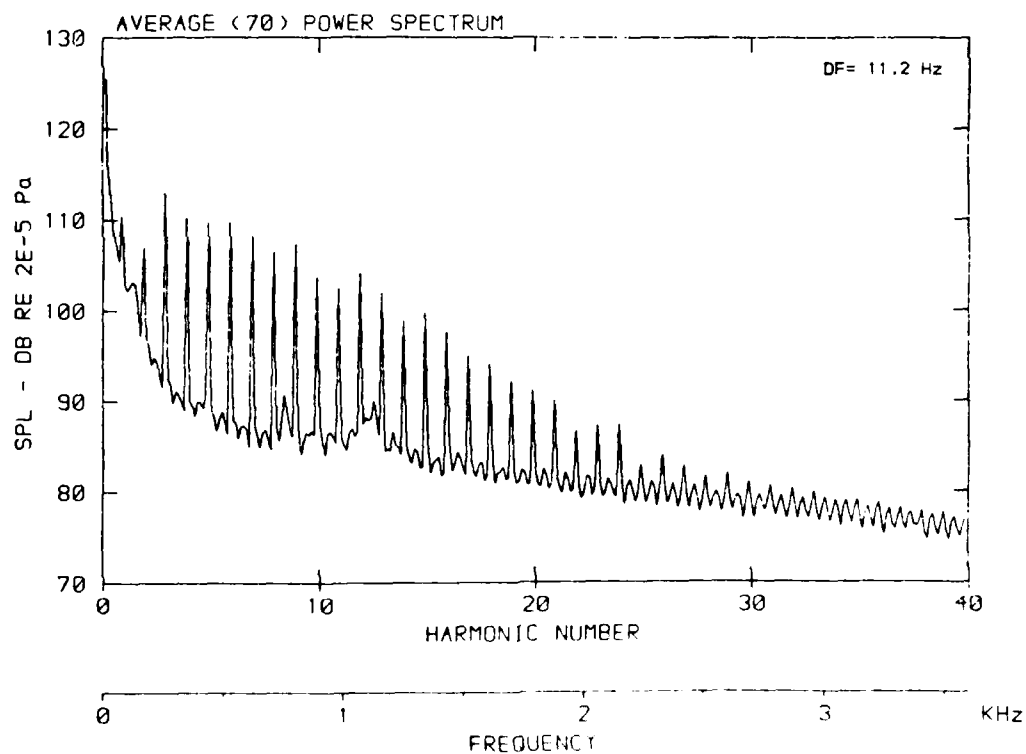
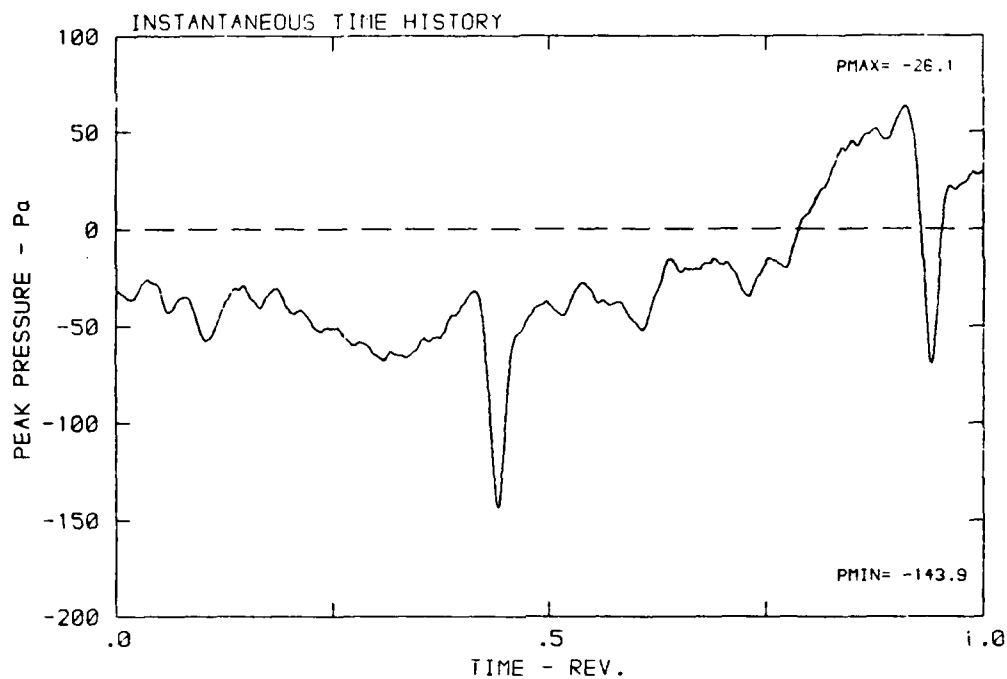
DATA POINT: LN-3 RUN: 156 MP: 8

β : 19.9° MH: .9727 n: 2700 rpm v/u : .268 ϕ : -3.8° T: 288.9 K



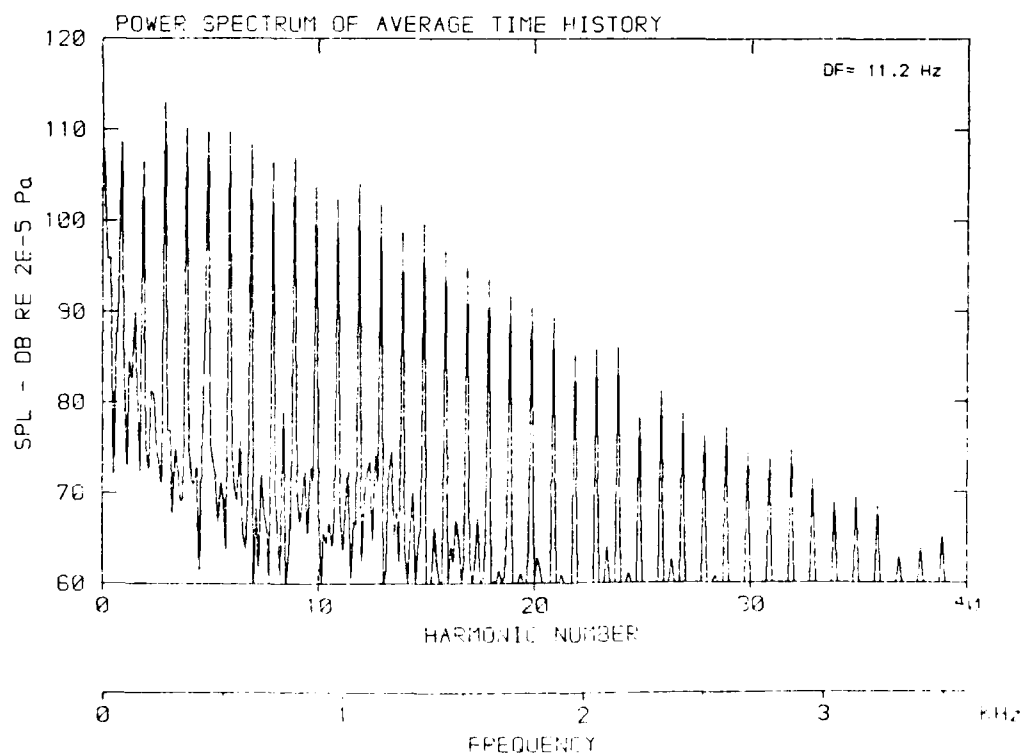
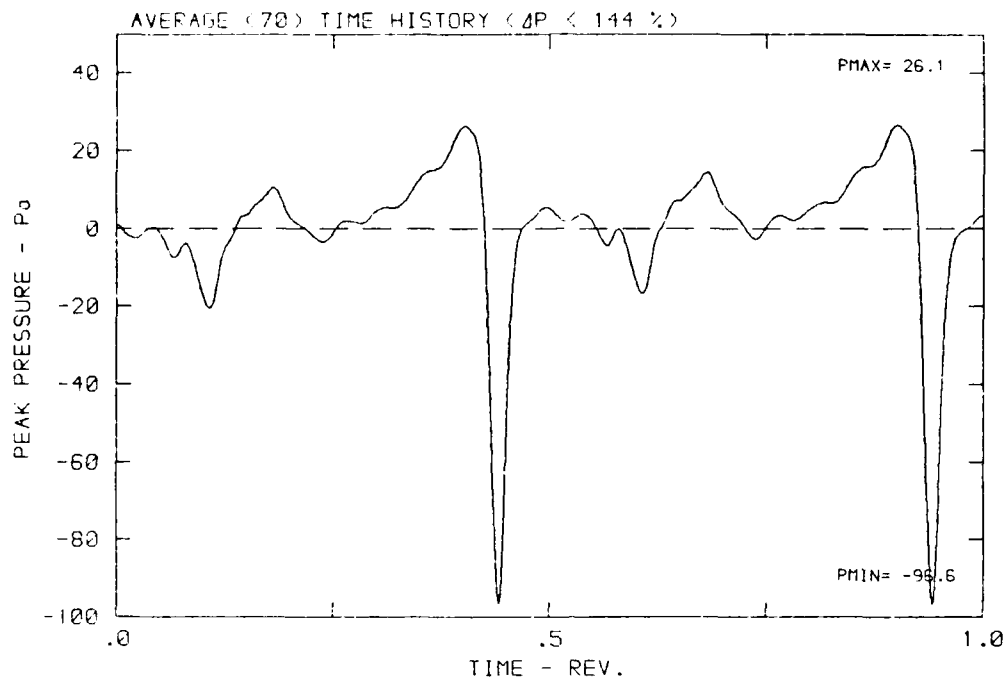
DATA POINT: LN-3 RUN: 156 MP: 9

β : 19.9° MH: .8727 n: 2700 rpm v/u : .268 ϕ : -3.3° T: 289.9 K



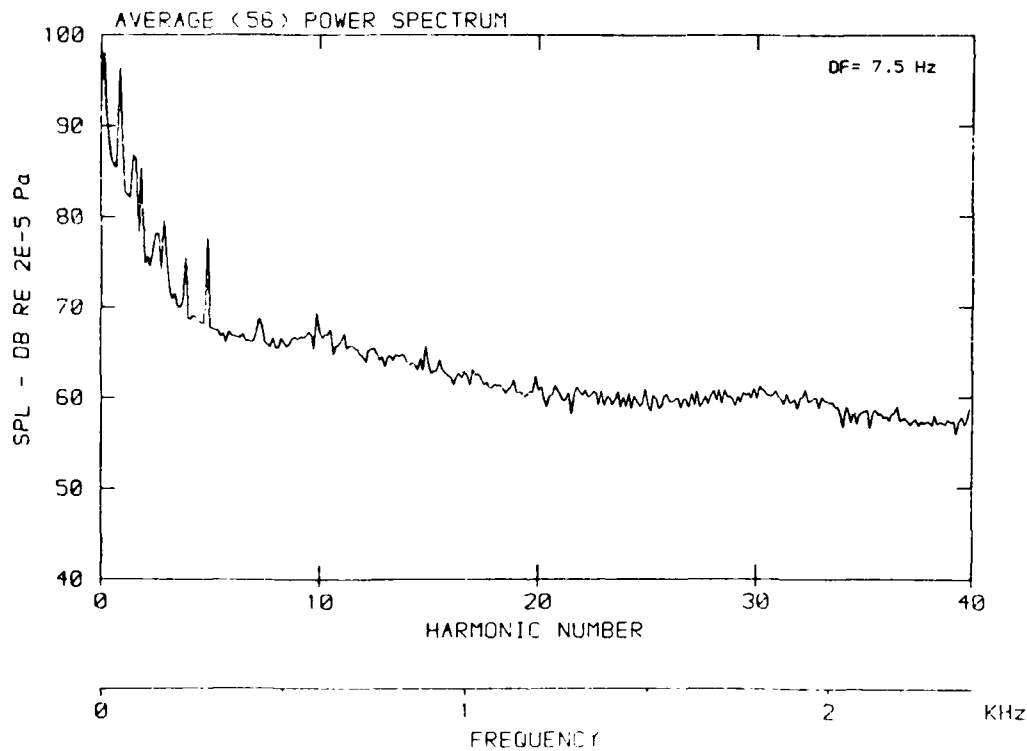
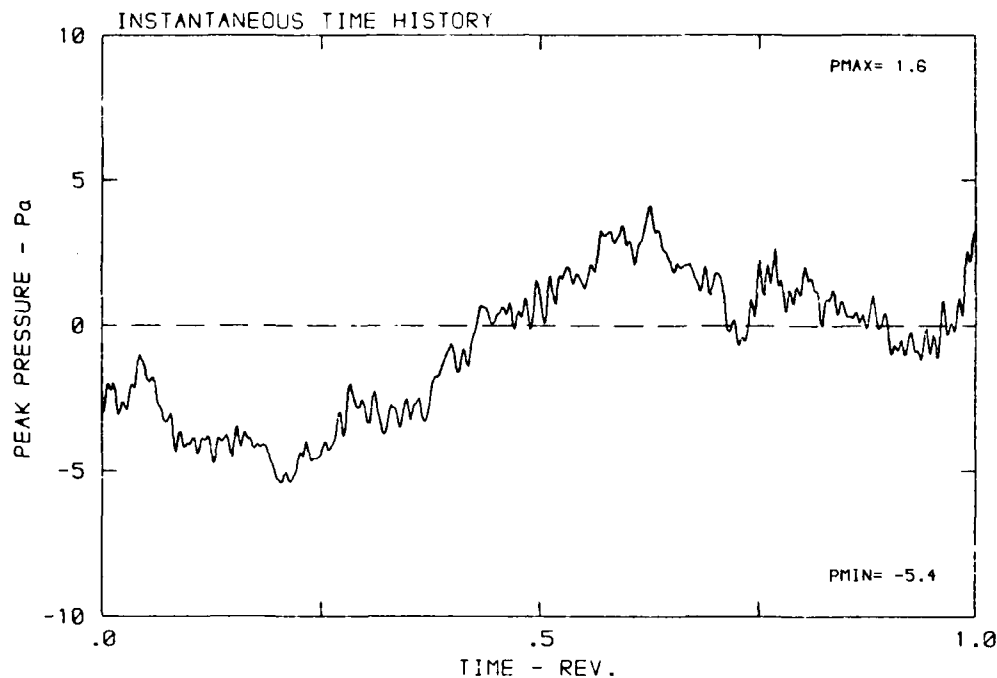
DATA POINT: LN-3 RUN: 156 MP: 9

β : 19.3° MH: .8727 n: 2700 rpm v/u : .268 ϕ : -3.8° T: 288.9 K



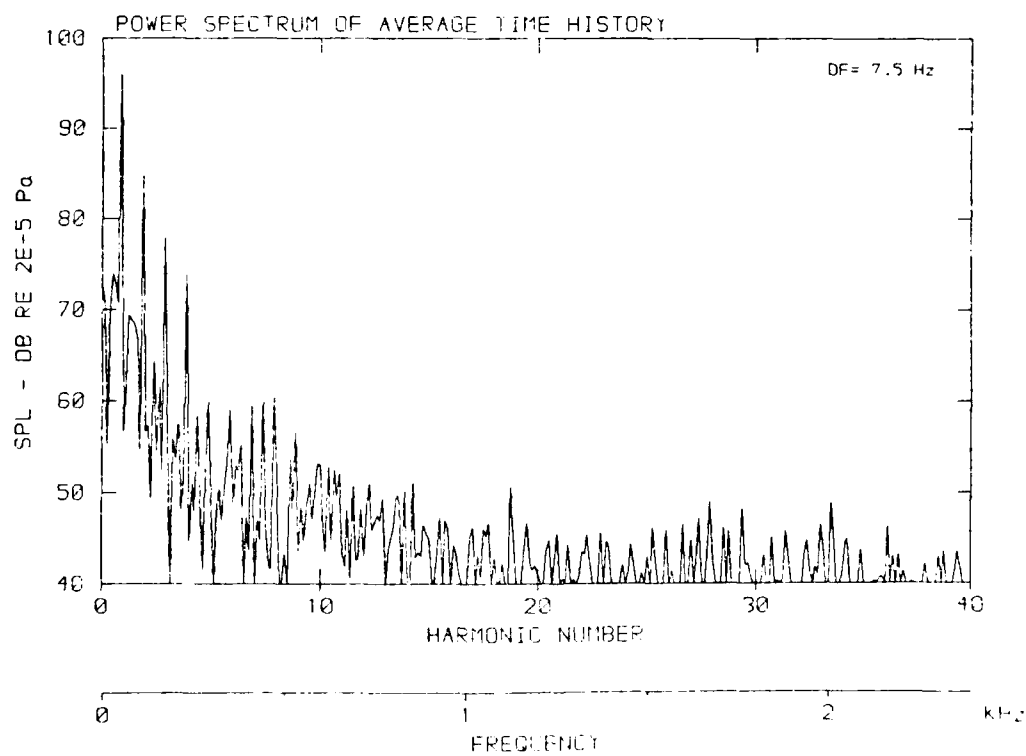
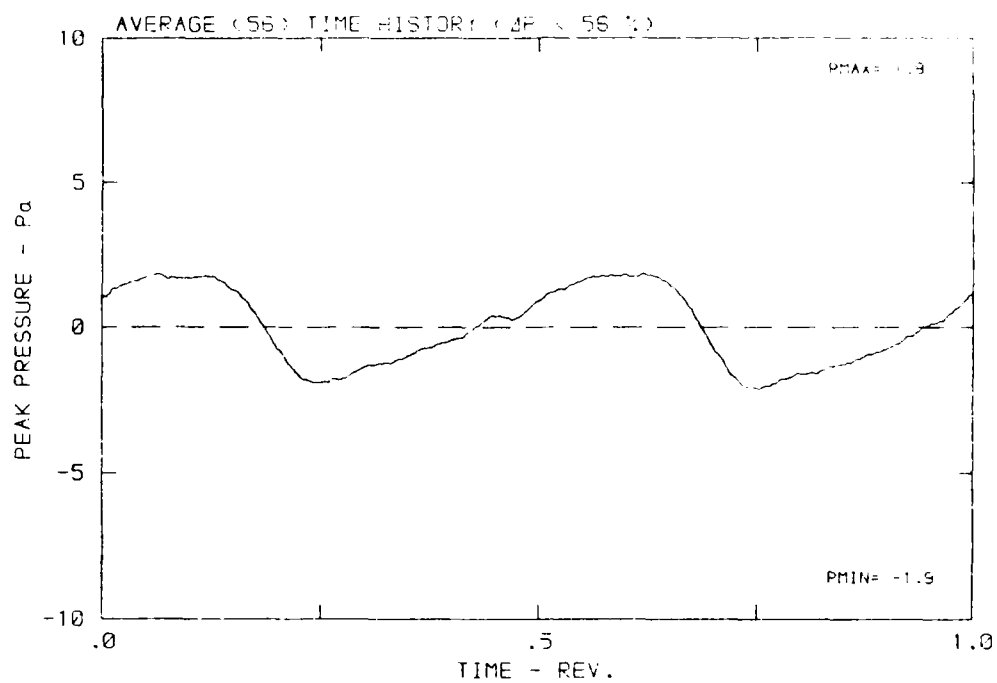
DATA POINT: LN-4 RUN: 157 MP: 1

β : 23.7° MH: .5345 n: 1800 rpm v/u : .268 ϕ : -3.8° T: 285.3 K



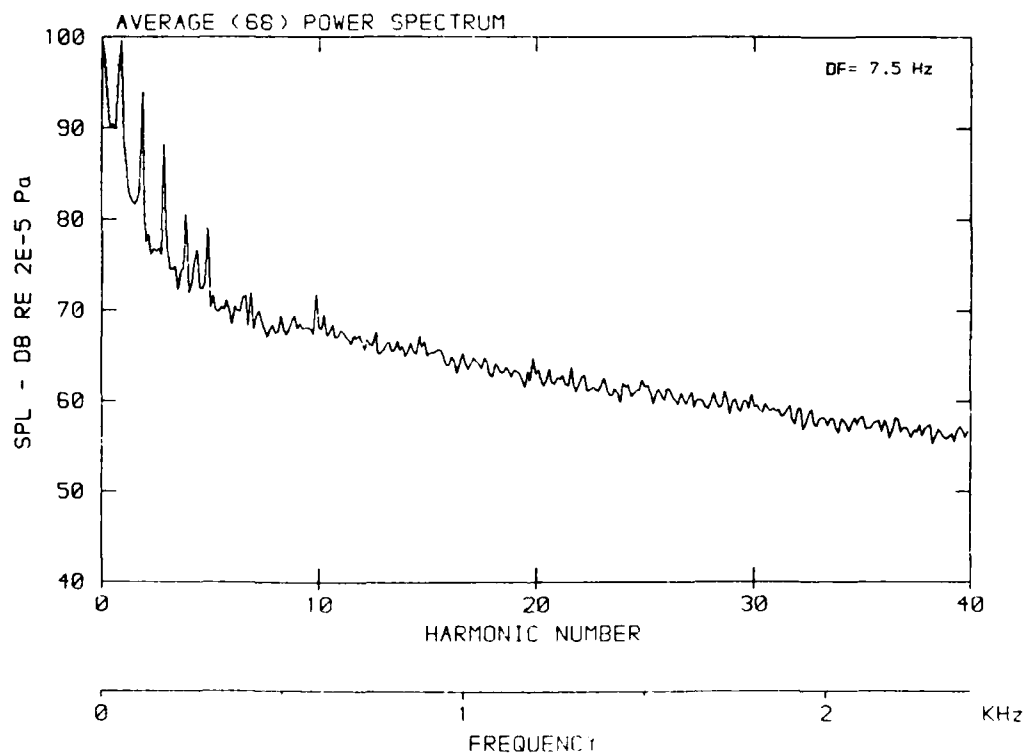
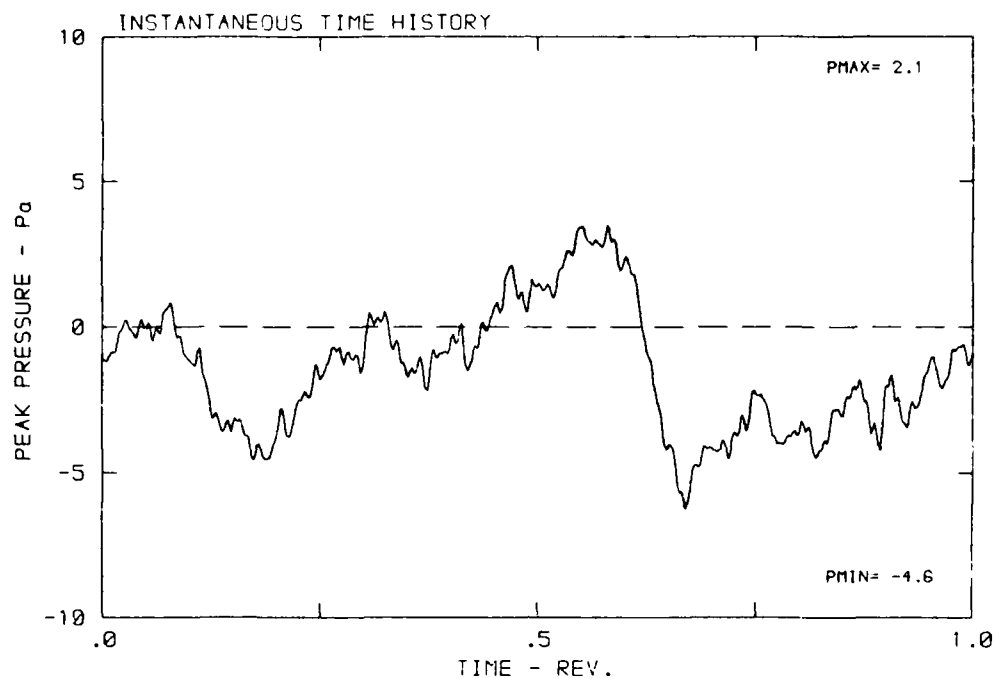
DATA POINT: LN-4 RUN: 157 MP: 1

β : 23.7° MH: .5845 n: 1800 rpm vru: .268 ϕ : -3.8° I: 286.3 K



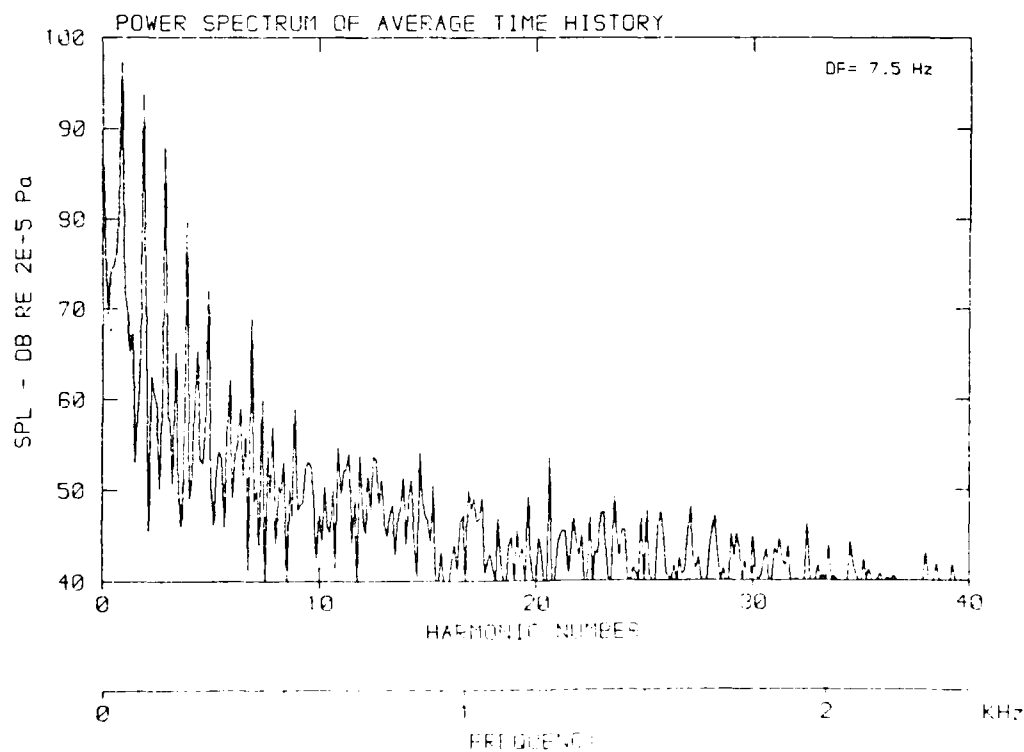
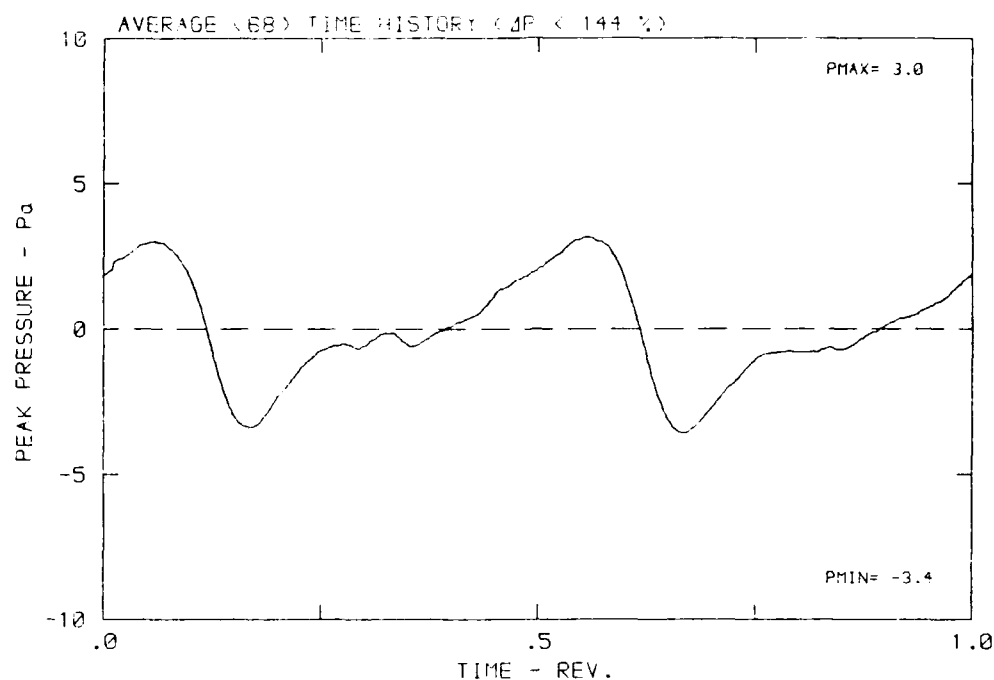
DATA POINT: LN-4 RUN: 157 MP: 2

β : 23.7° MH: .5845 n: 1800 rpm v/u: .268 ϕ : -3.8° T: 286.3 K



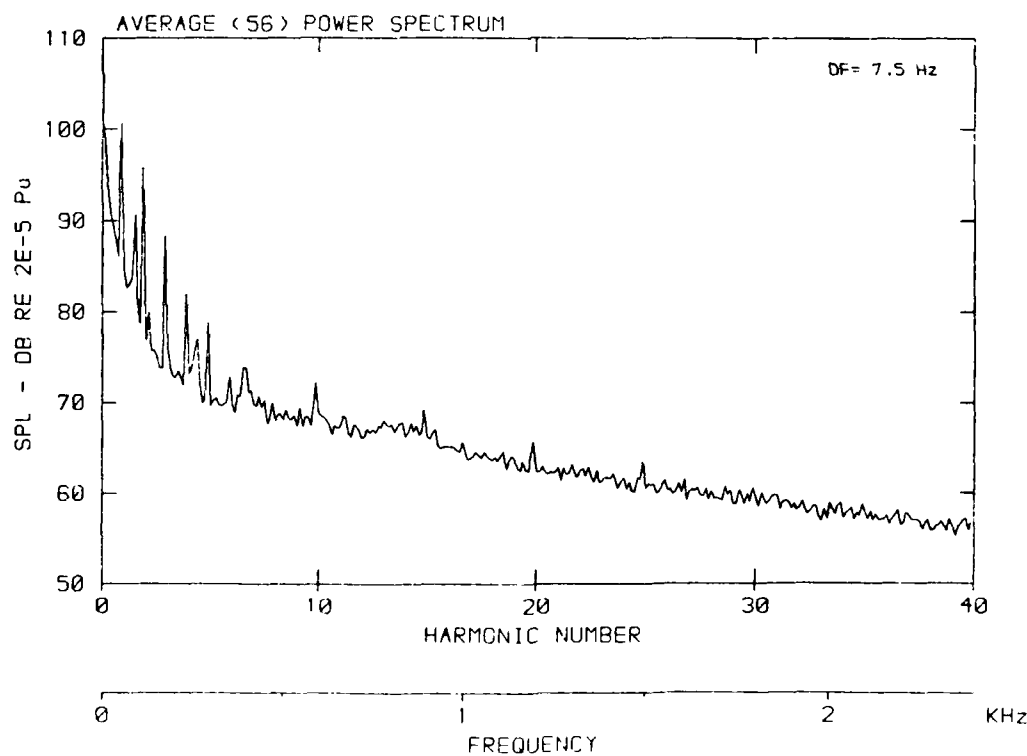
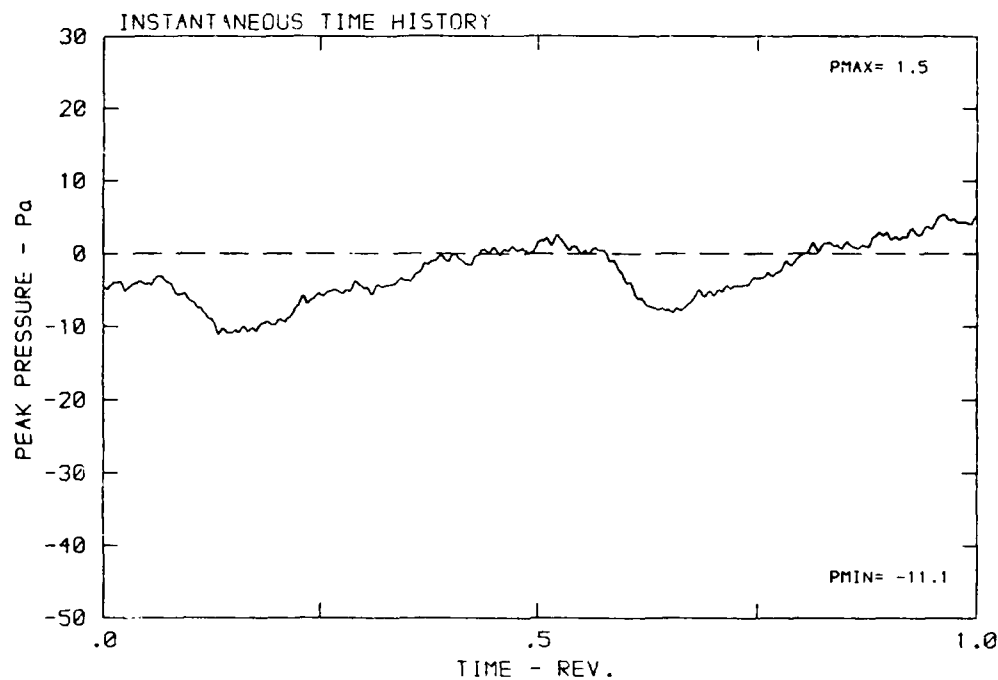
DATA POINT: LN-4 RUN: 157 MP: 2

β : 23.7° MH: .5845 n: 1800 rpm v_{tu} : .268 ϕ : -3.6° T: 286.3 K



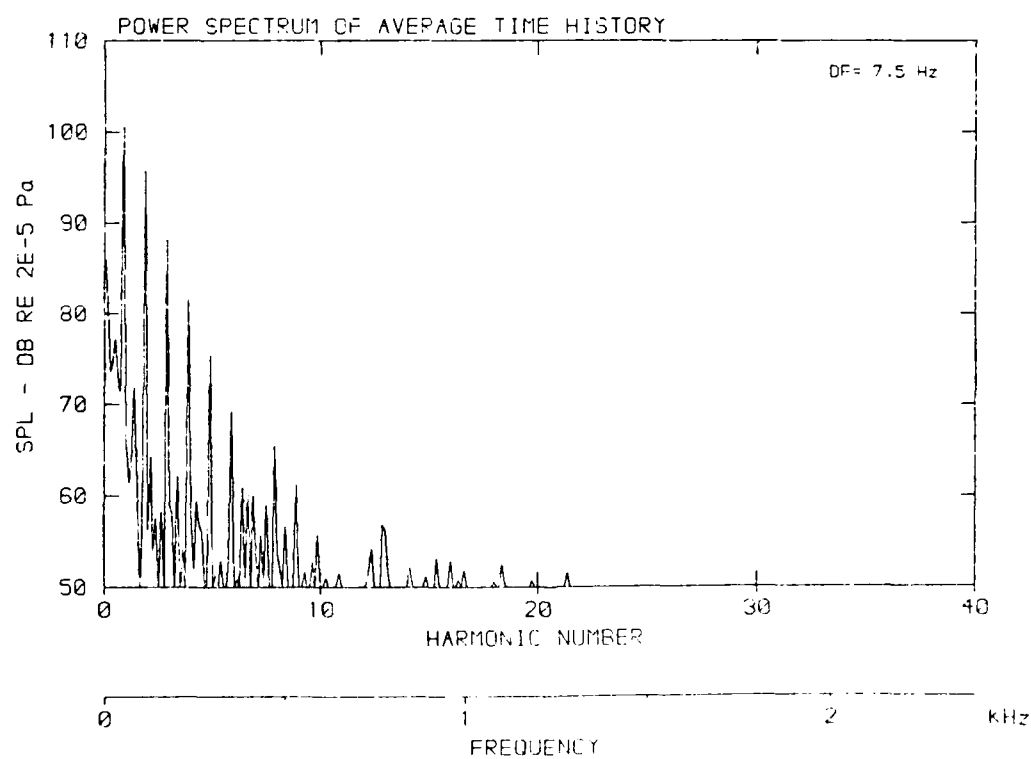
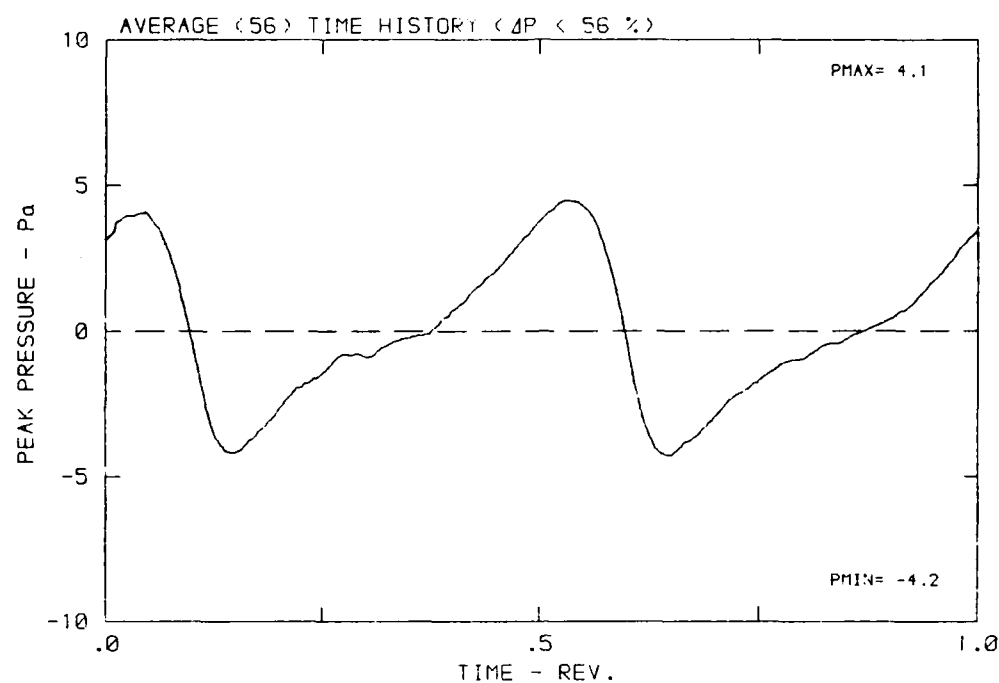
DATA POINT: LN-4 RUN: 157 MP: 3

β : 23.7° MH: .5845 n: 1800 rpm v/u : .266 ϕ : -3.8° T: 296.3 K



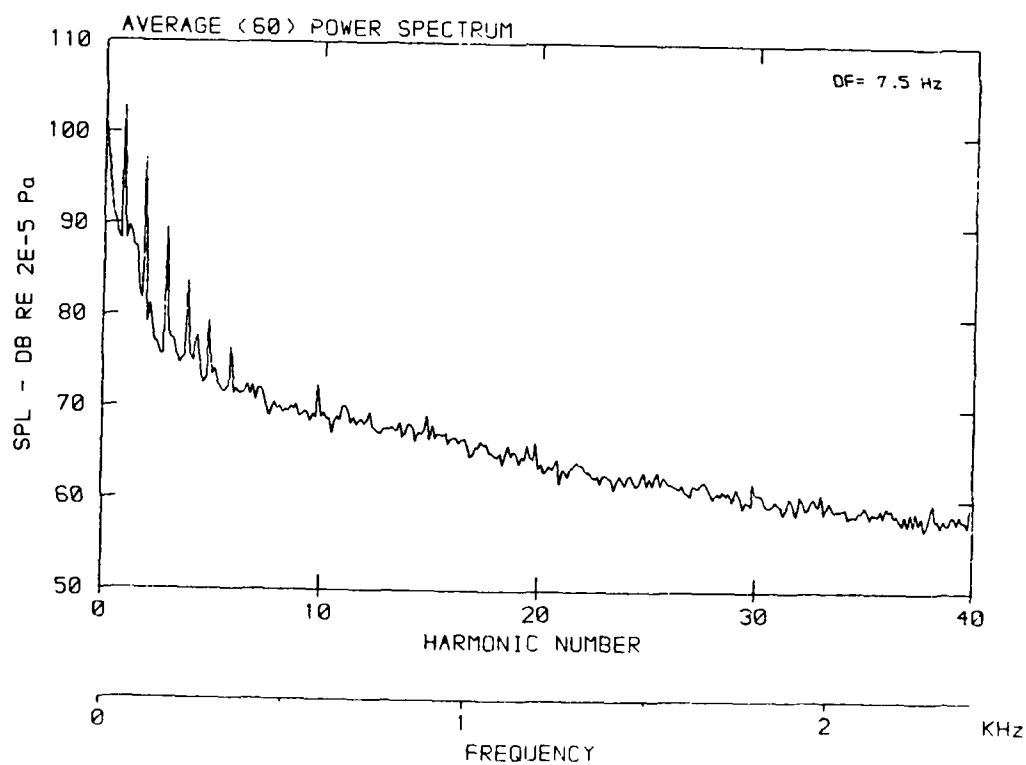
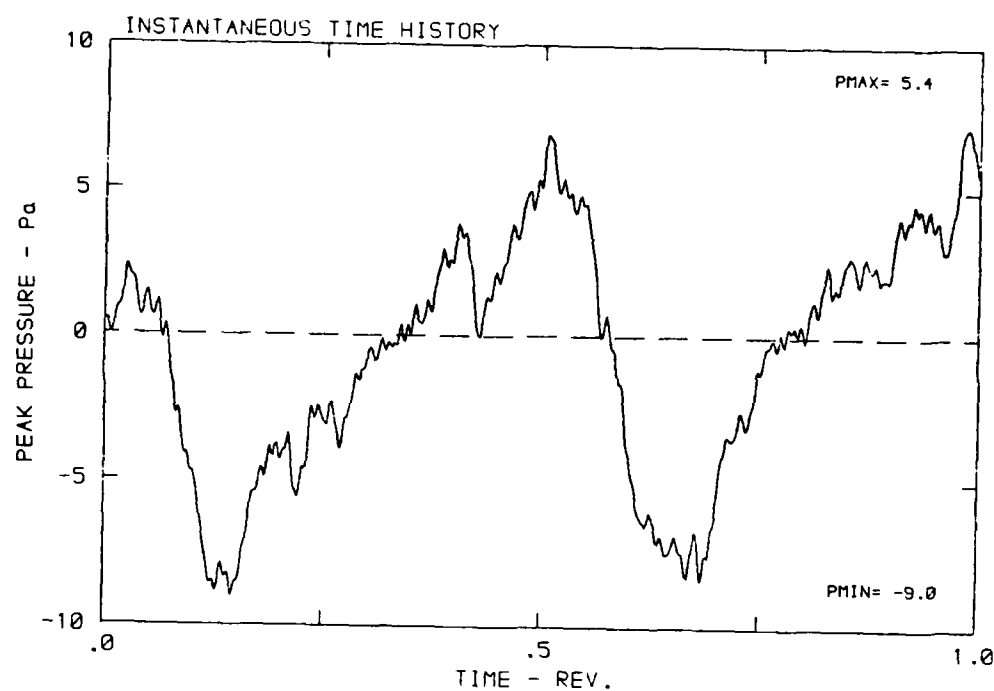
DATA POINT: LN-4 RUN: 157 MP: 3

β : 23.7° MH: .5845 n: 1800 rpm v/u : .268 ϕ : -3.8° T: 286.3 K



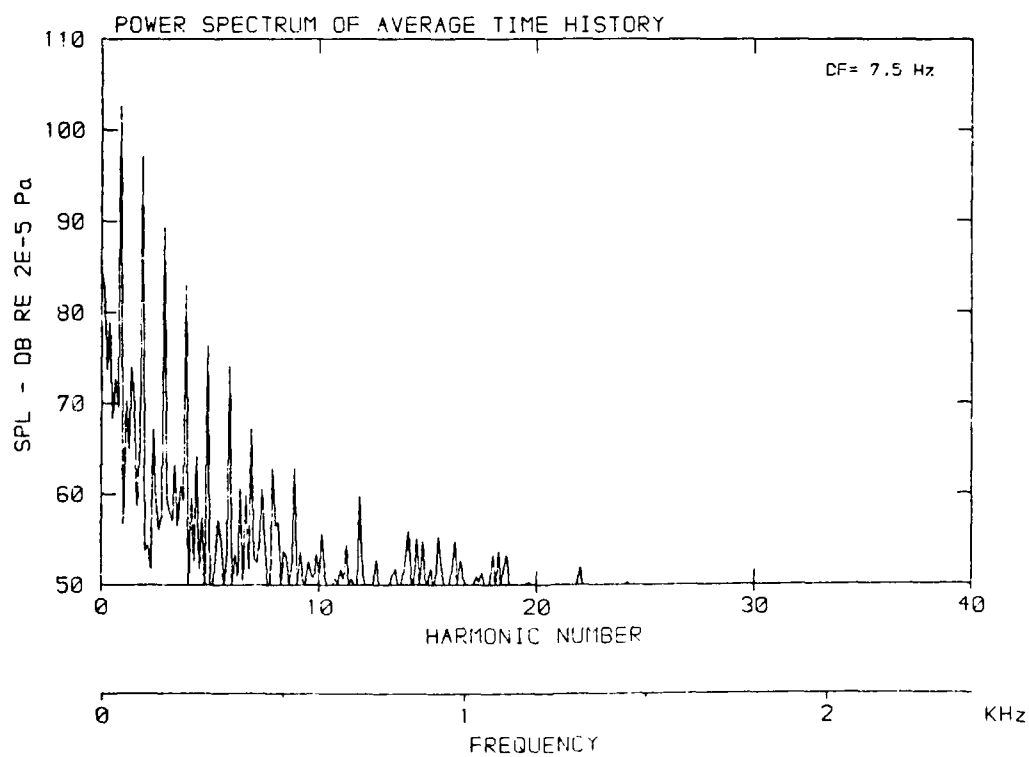
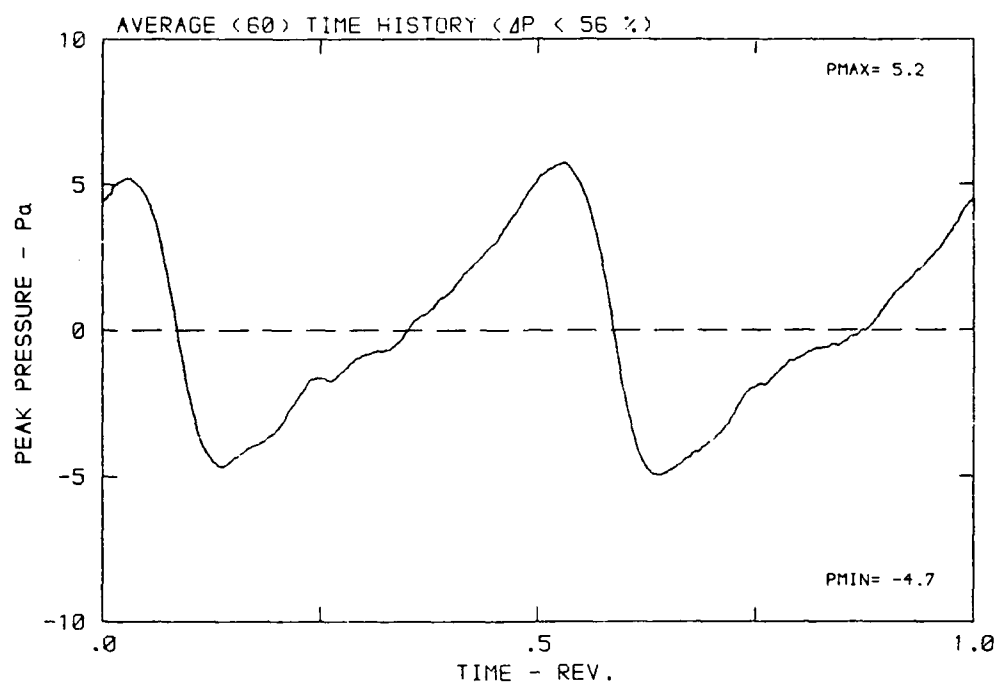
DATA POINT: LN-4 RUN: 157 MP: 4

β : 23.7° MH: .5845 n: 1800 rpm v/u: .268 ϕ : -3.8° T: 296.3 K



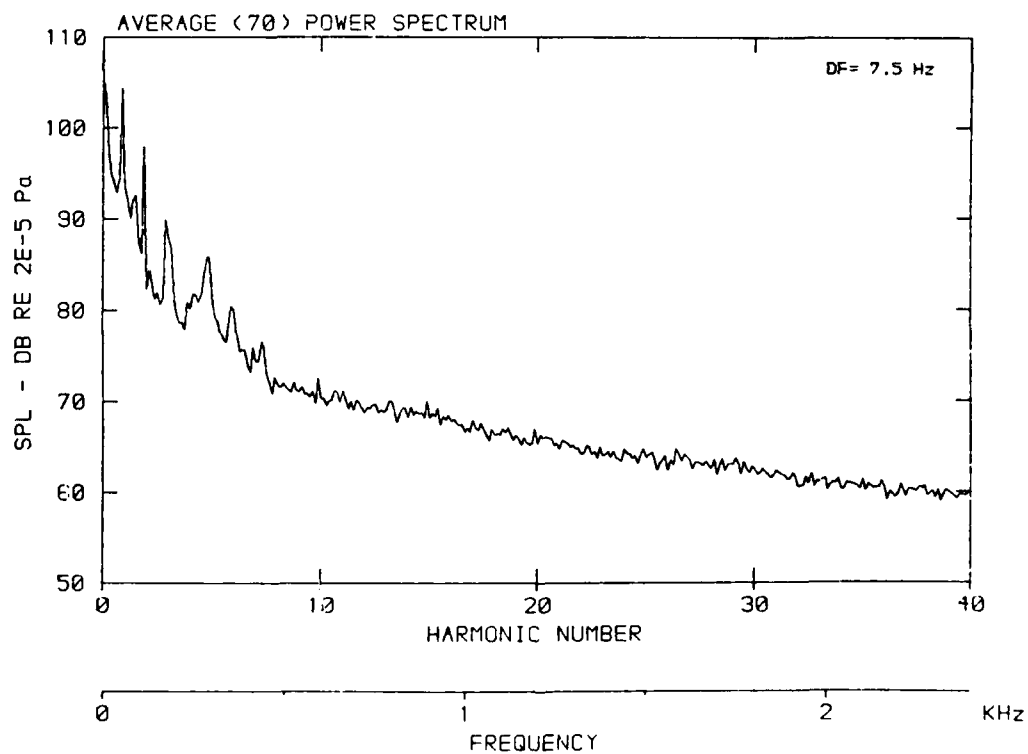
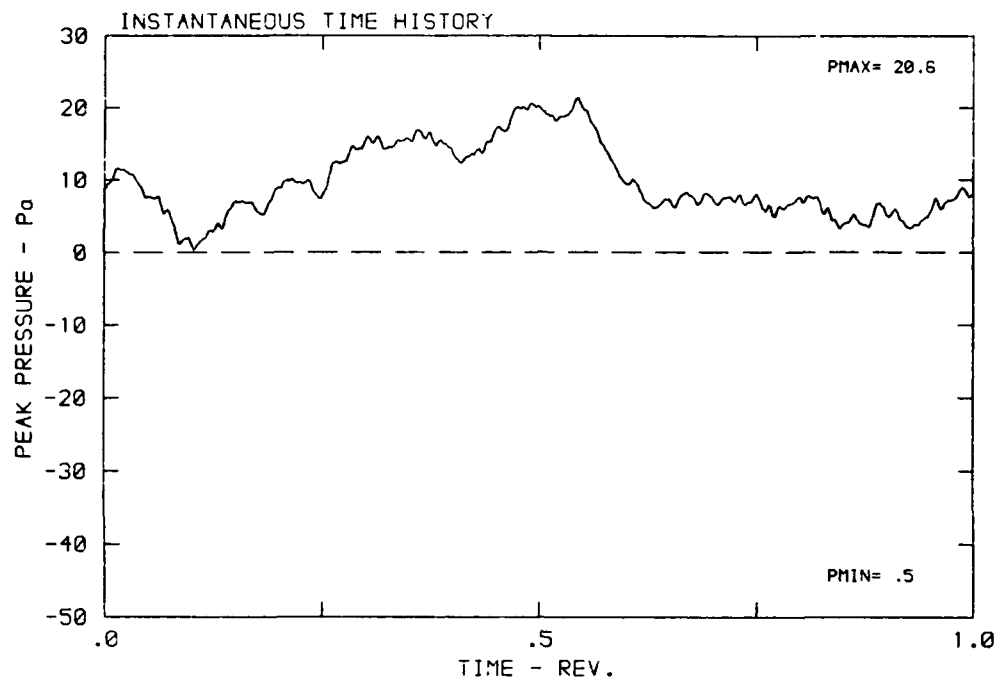
DATA POINT: LN-4 RUN: 157 MP: 4

β : 23.7° MH: .5845 n: 1800 rpm v/u : .268 ϕ : -3.8° T: 286.3 K



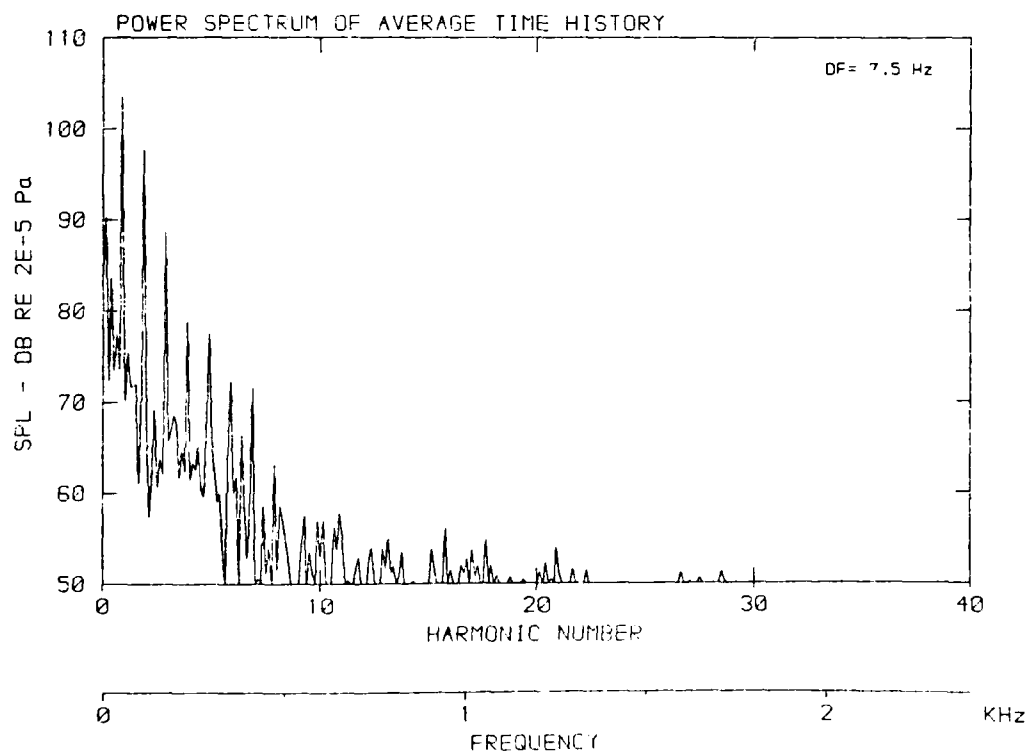
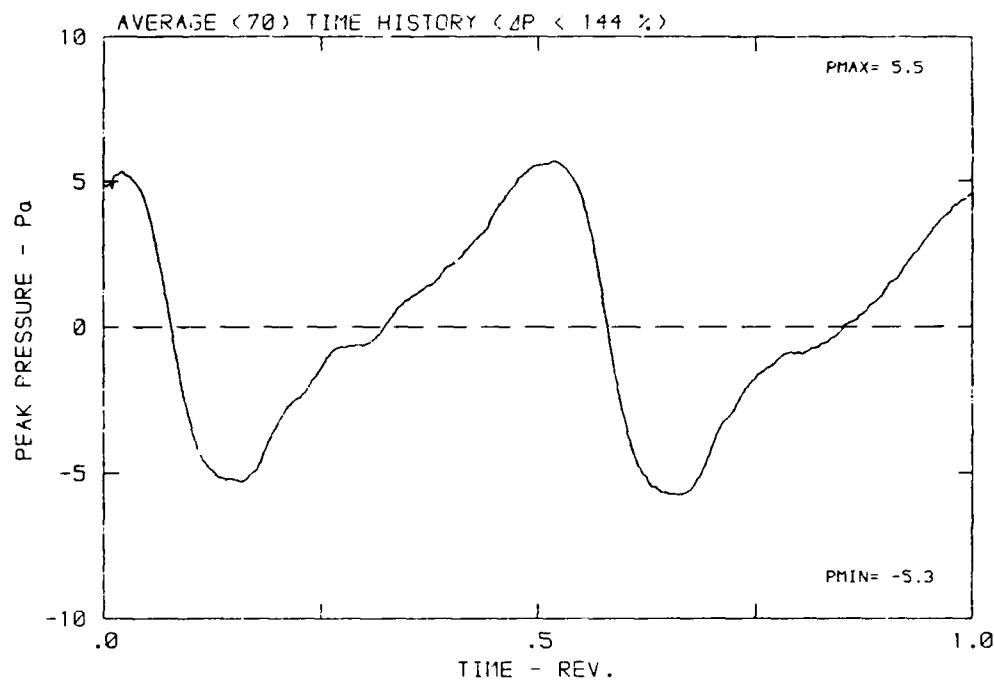
DATA POINT: LN-4 RUN: 157 MP: 5

β : 23.7° MH: .5845 n: 1800 rpm v/u : .268 ϕ : -3.8° T: 286.3 K



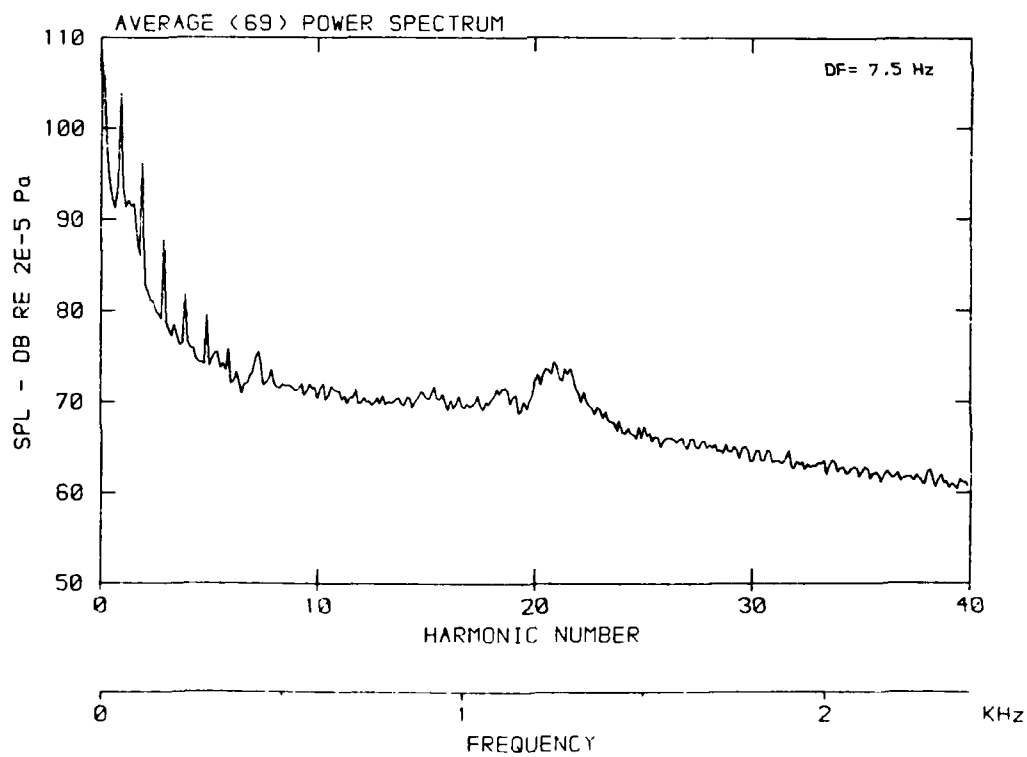
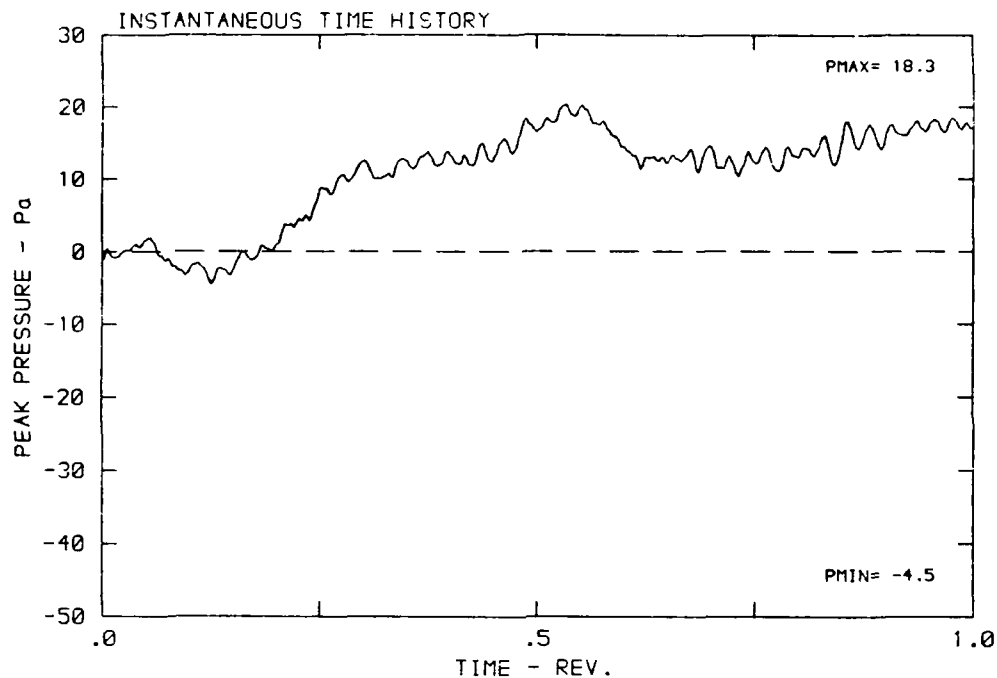
DATA POINT: LN-4 RUN: 157 MF: 5

β : 23.7° MH: .5845 n: 1800 rpm v/u : .268 ϕ : -3.8° T: 286.3 K



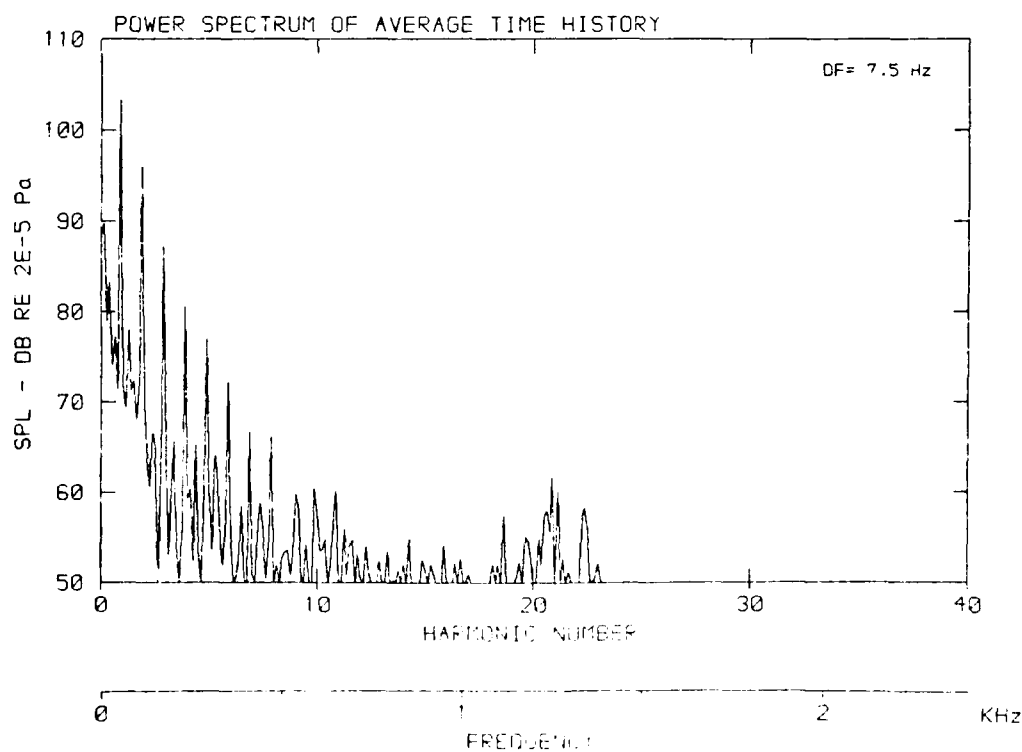
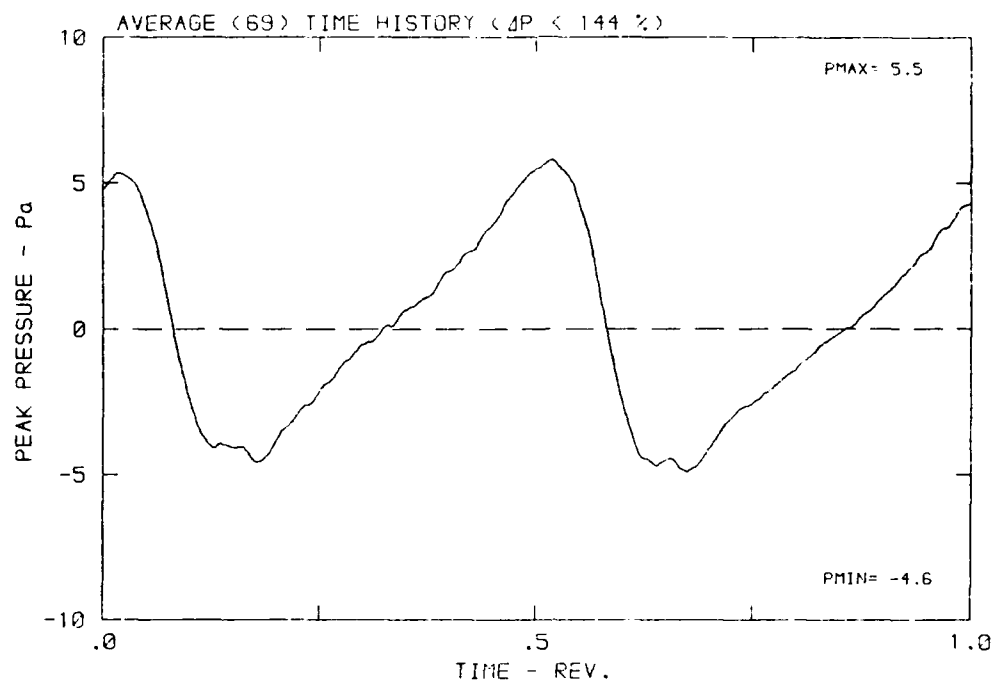
DATA POINT: LN-4 RUN: 157 MP: 6

β : 23.7° MH: .5845 n: 1800 rpm v/u : .268 ϕ : -3.8° T: 286.3 K



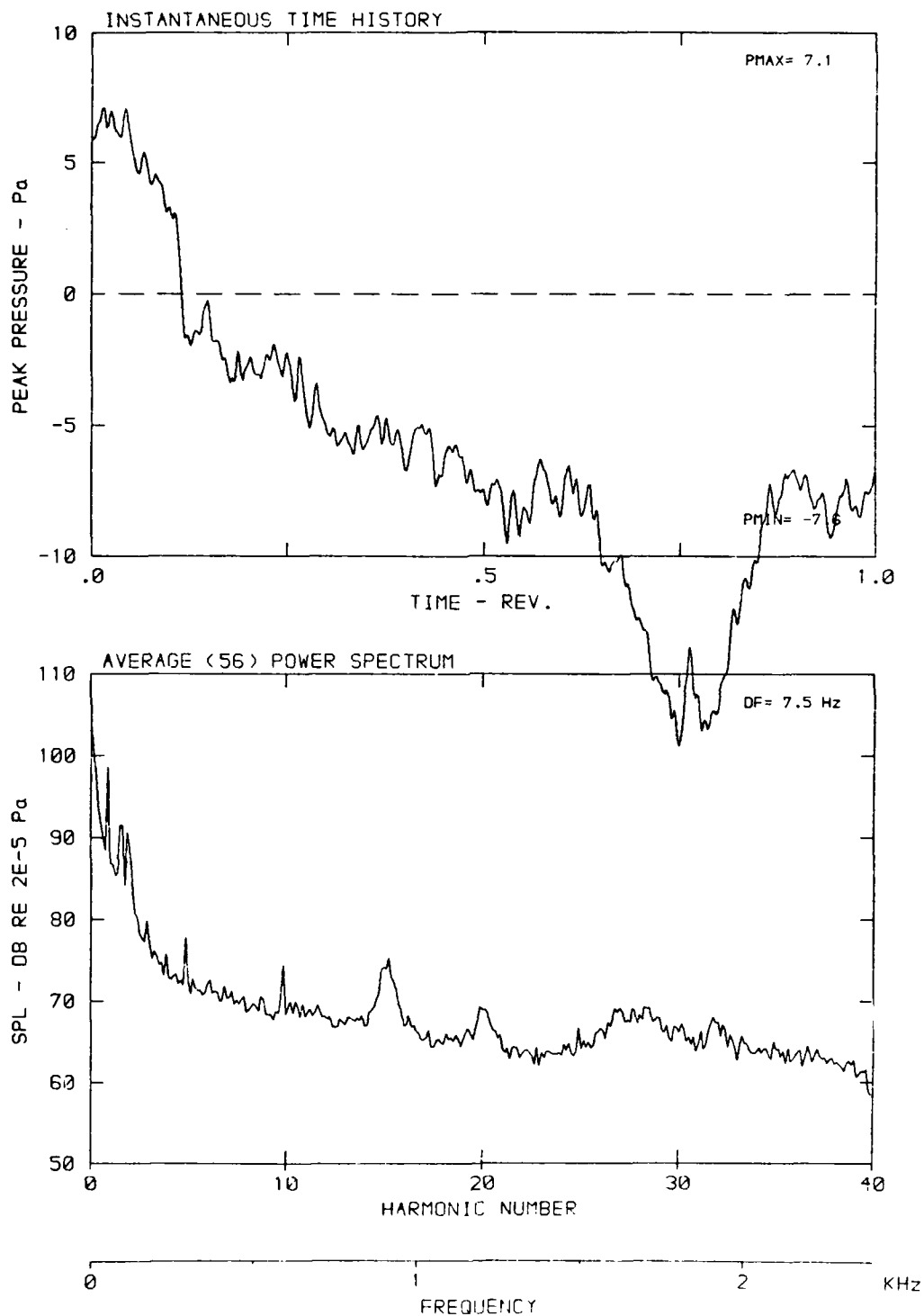
DATA POINT: LN-4 RUN: 157 MF: E

β : 23.7° MH: .5845 n: 1800 rpm v_{tu} : .268 ϕ : -3.8° T: 286.3 K



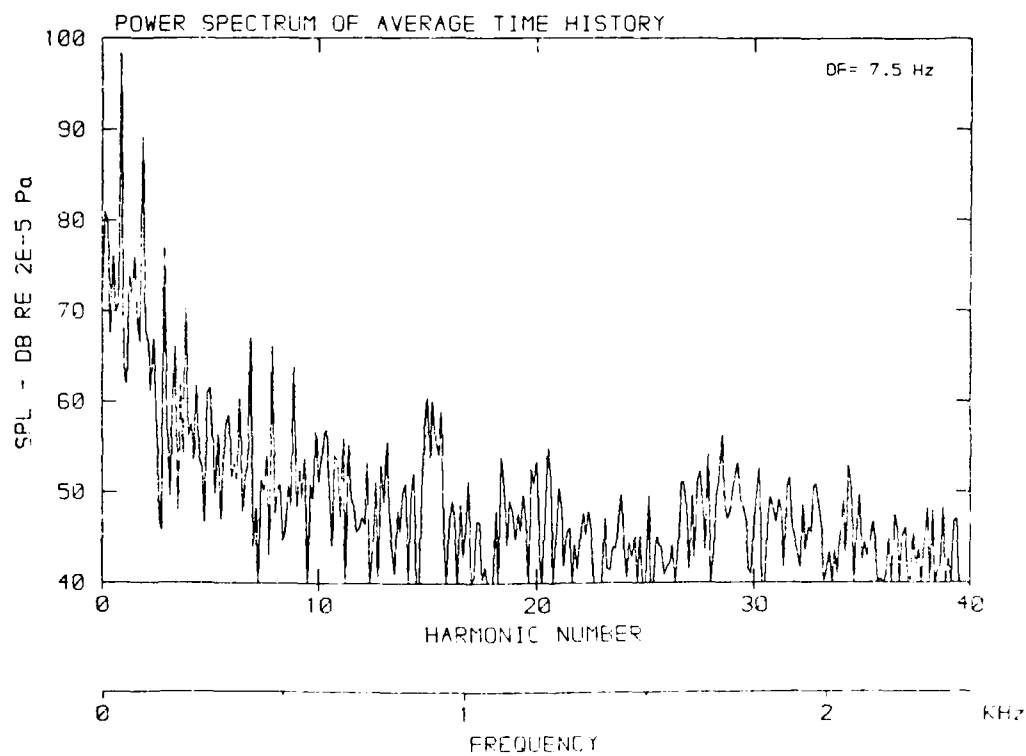
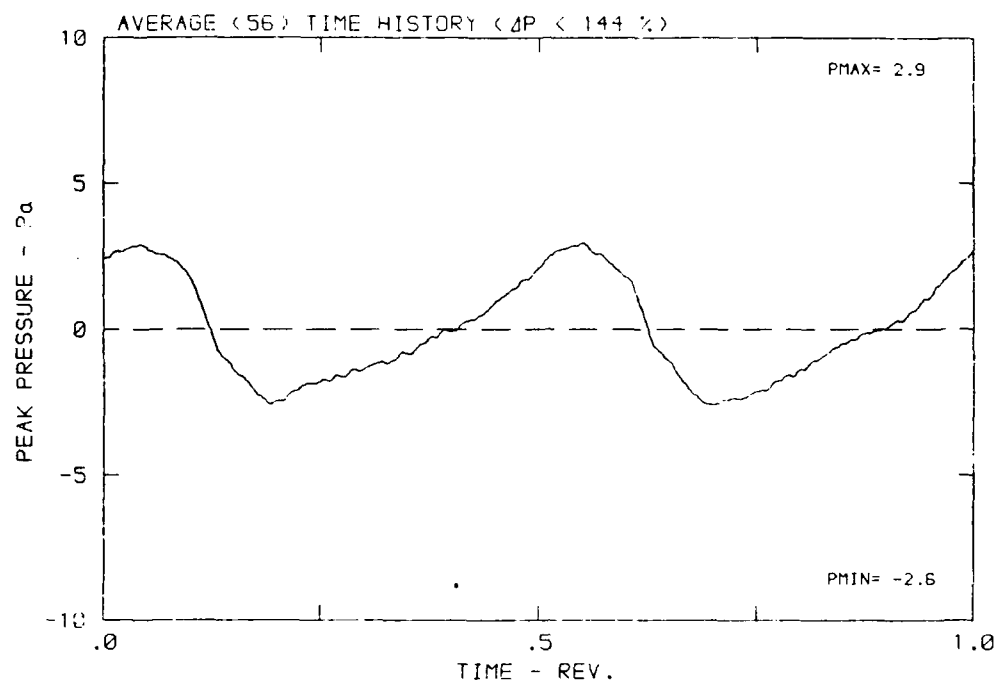
DATA POINT: LN-4 RUN: 157 MF: 7

β : 23.7° MH: .5845 n: 1800 rpm v/u : .268 ϕ : -3.8° T: 286.3 K



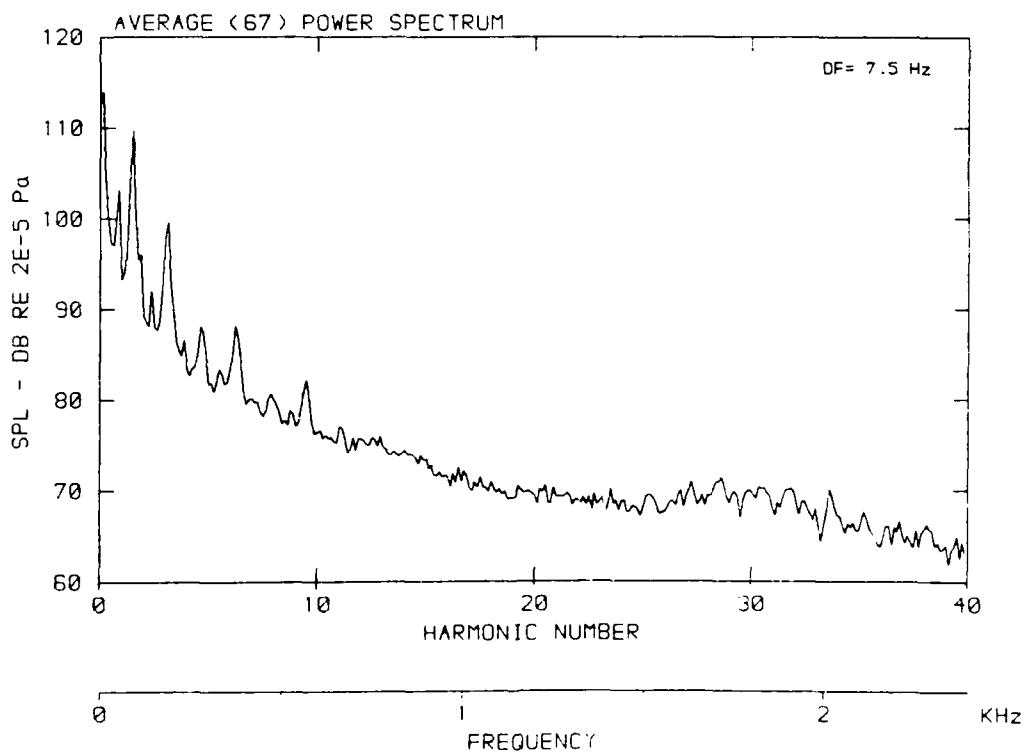
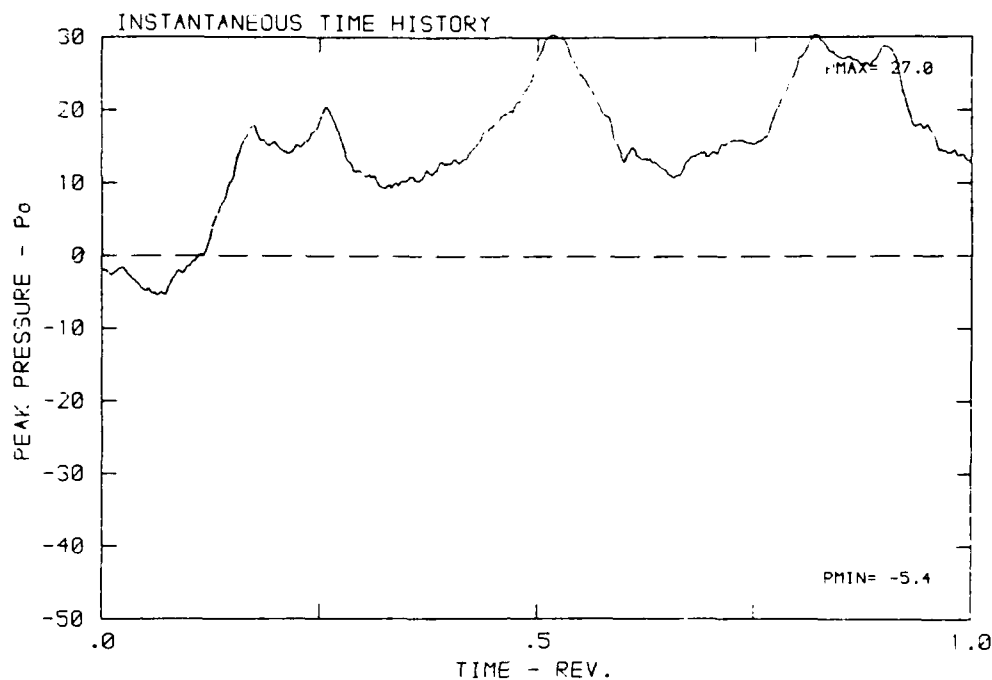
DATA POINT: LN-4 RUN: 157 MP: 7

β : 23.7° MH: .5845 n: 1800 rpm v/u : .268 ϕ : -3.8° T: 286.3 K



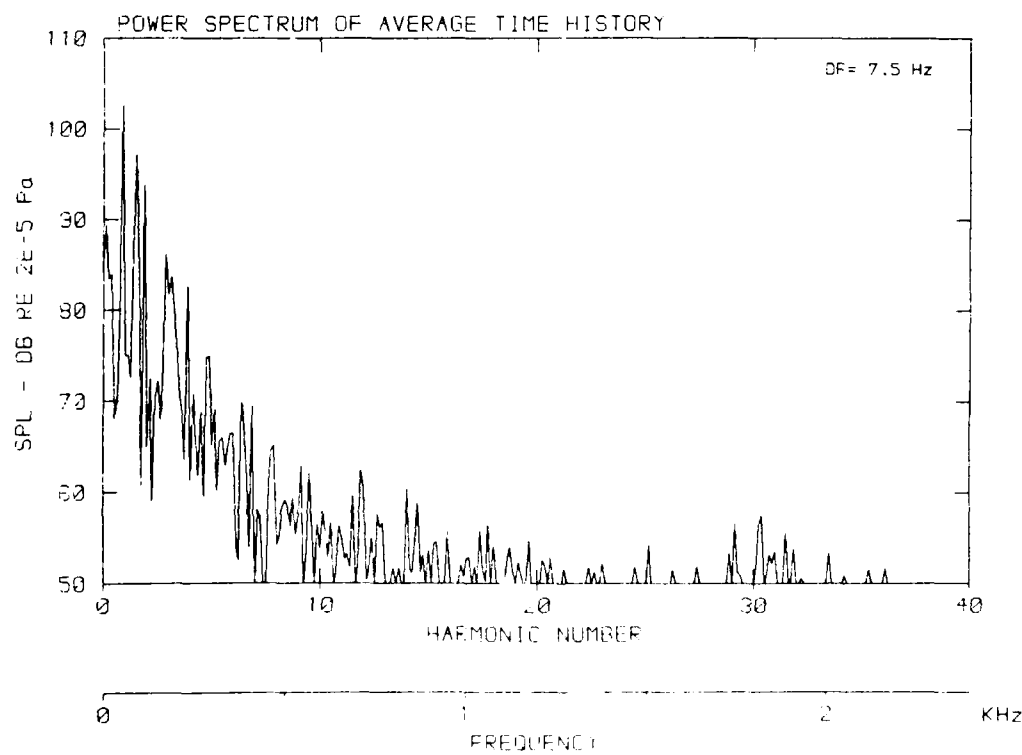
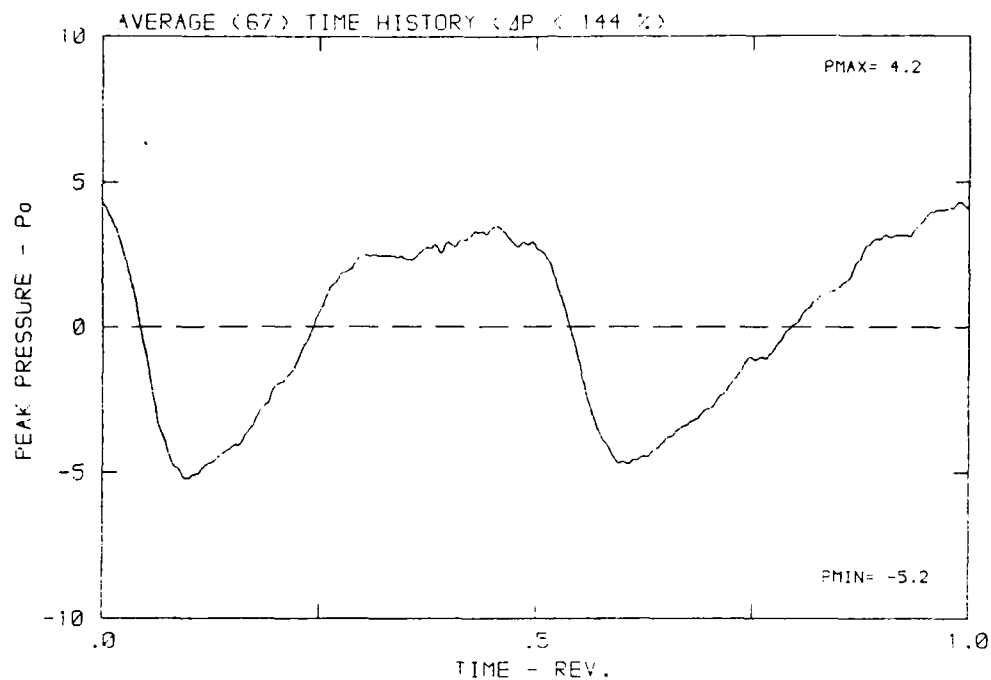
DATA POINT: LN-4 RUN: 157 MP: 8

θ : 23.7° MH: .5845 n: 1800 rpm v/u: .268 ϕ : -3.8° T: 286.3 K



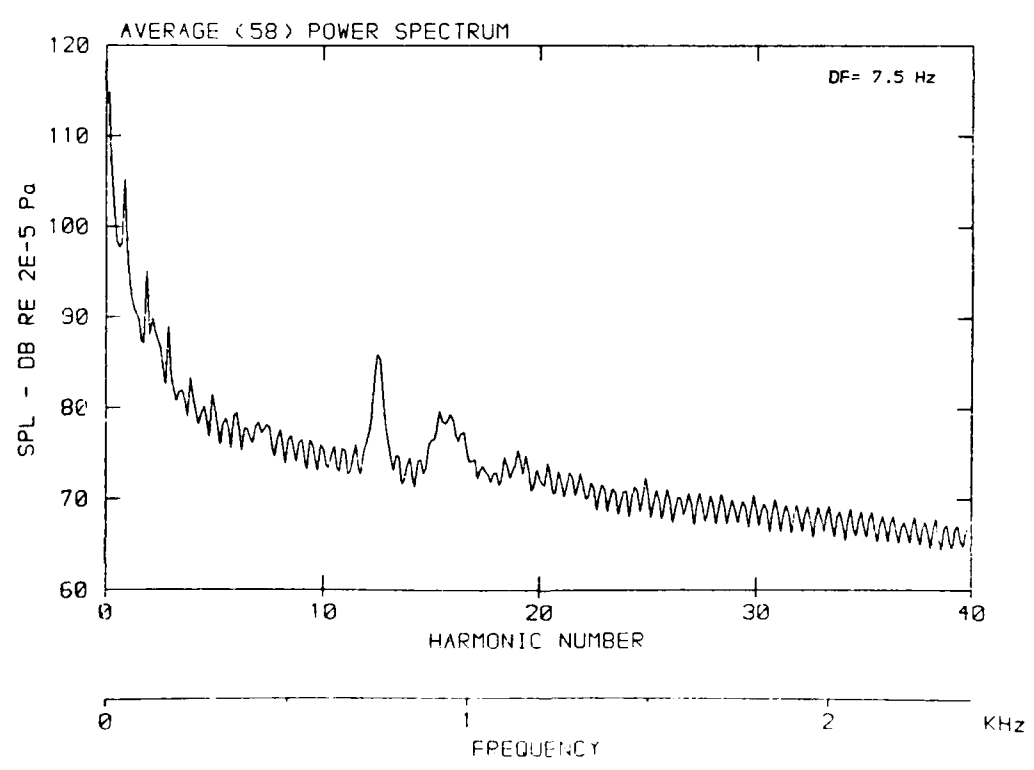
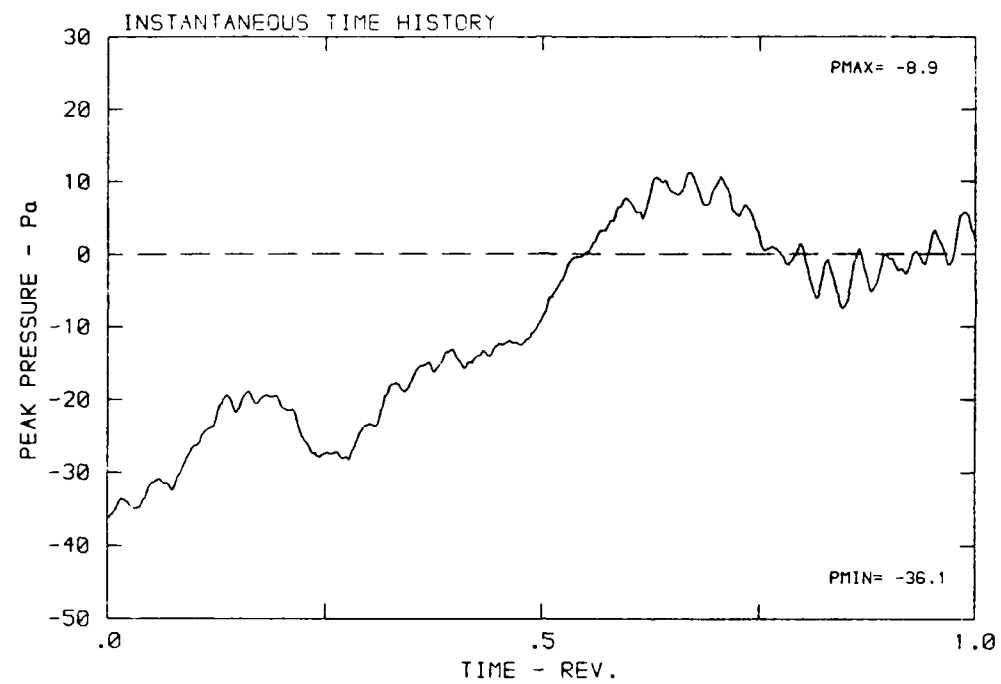
DATA POINT: LN-4 RUN: 157 MP: 8

β : 23.7° MH: .5845 n: 1800 rpm v/u : .268 ϕ : -3.8° T: 286.3 K



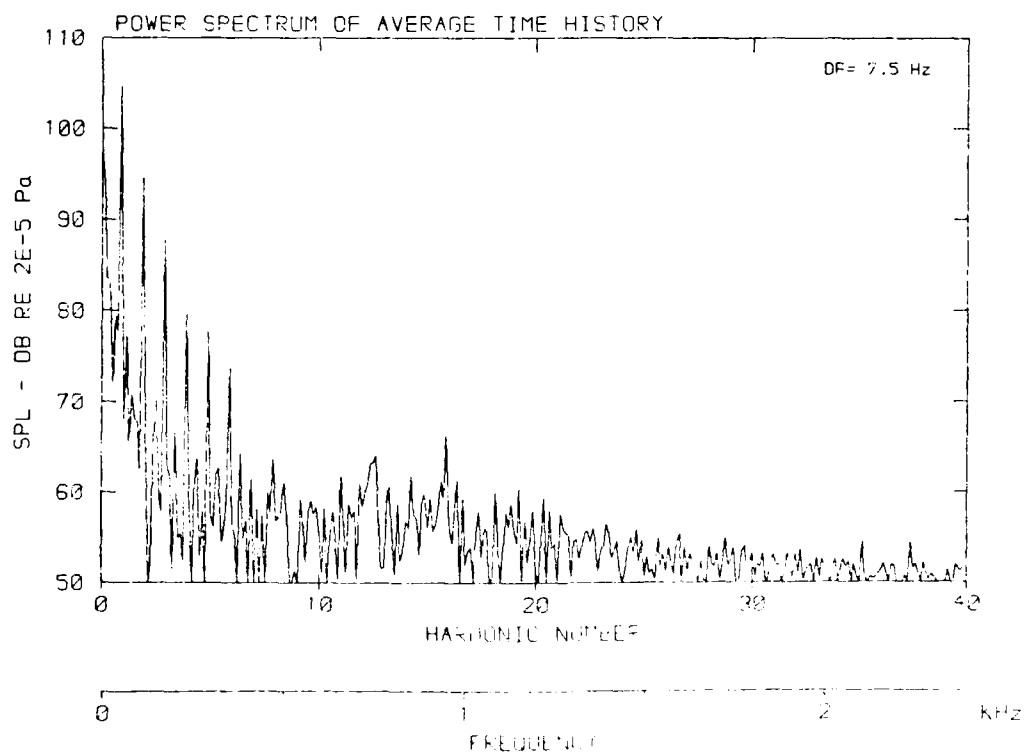
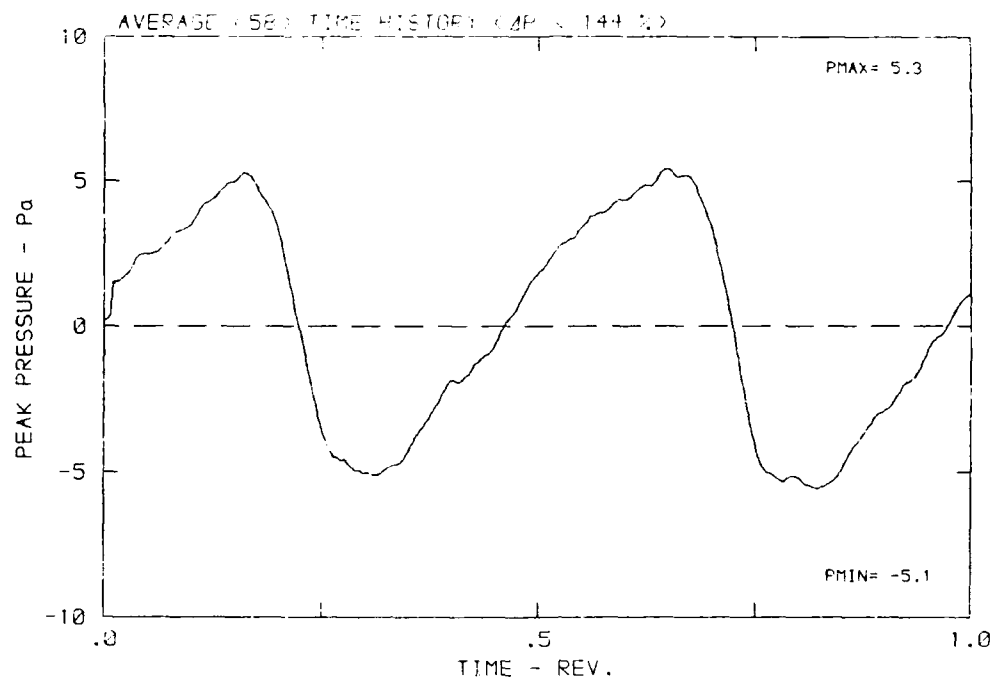
DATA POINT: LN-4 RUN: 157 MP: 9

β : 23.7° MH: .5845 n: 1800 rpm v/u : .268 ϕ : -3.8° T: 286.3 K



DATA POINT: UN-4 RUN: 157 MP: 9

β : 23.7° MH: .5843 n: 1800 rpm ν : .268 p: -3.8° T: 286.3 K



AD-A174 988

DFVLR/FAR (DEUTSCHE FORSCHUNGS-UND VERSUCHSANSTALT FUER
LUFT UND RAUMFAHR.. (U) DEUTSCHE FORSCHUNGS- UND
VERSUCHSANSTALT FUER LUFT- UND RAUMF..

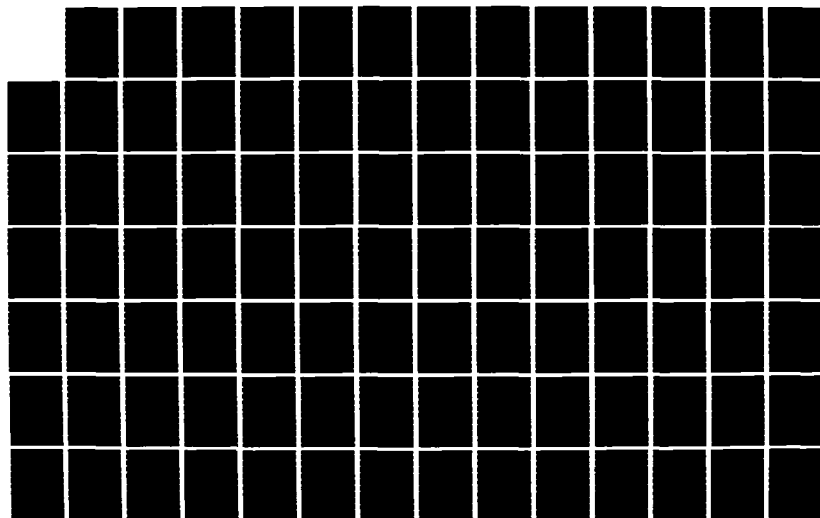
3/6

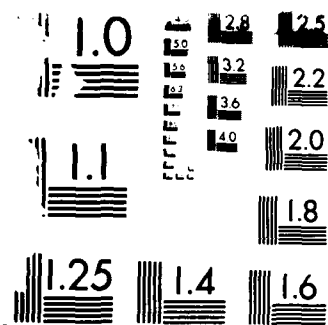
UNCLASSIFIED

M M DOBRZYNSKI ET AL. 1986

F/G 28/1

NL

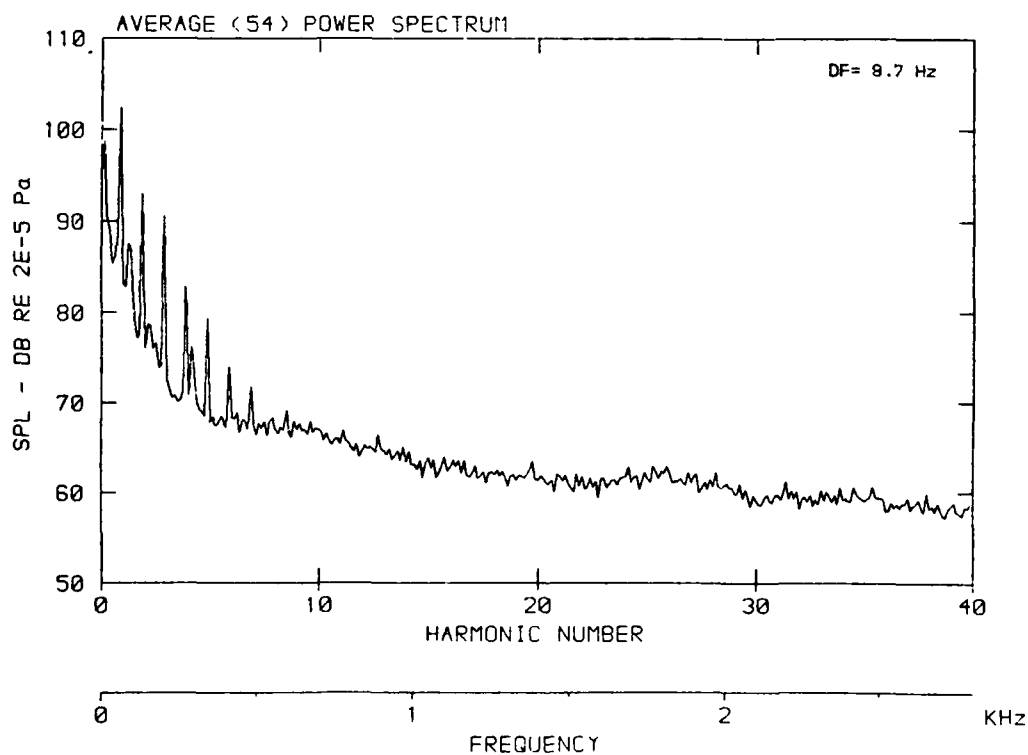
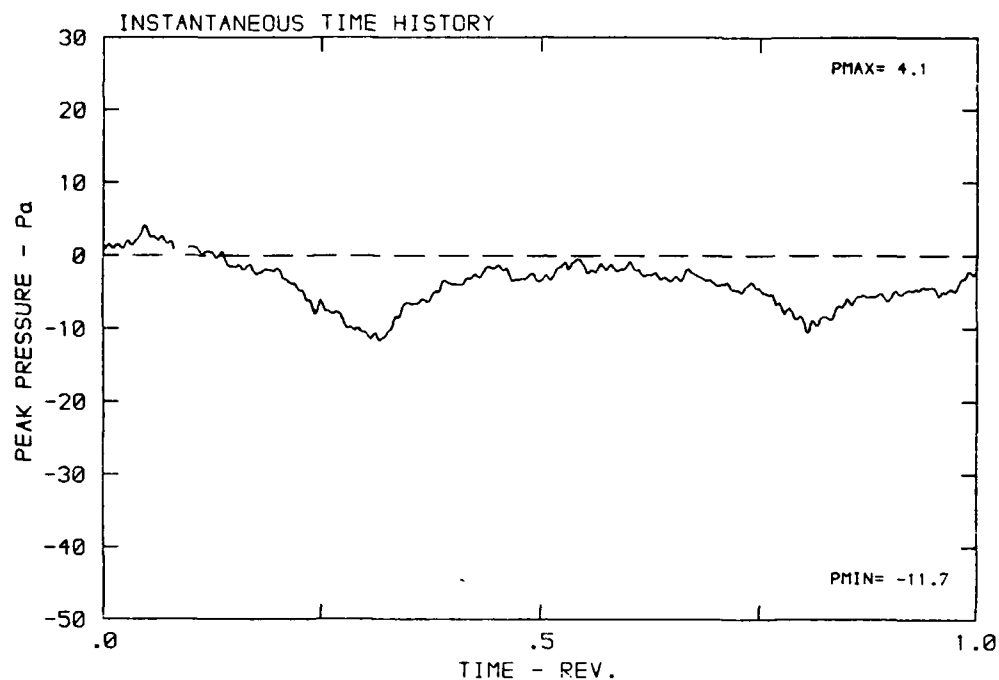




U.S. GOVERNMENT PRINTING OFFICE: 1963 O - 348-100
RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

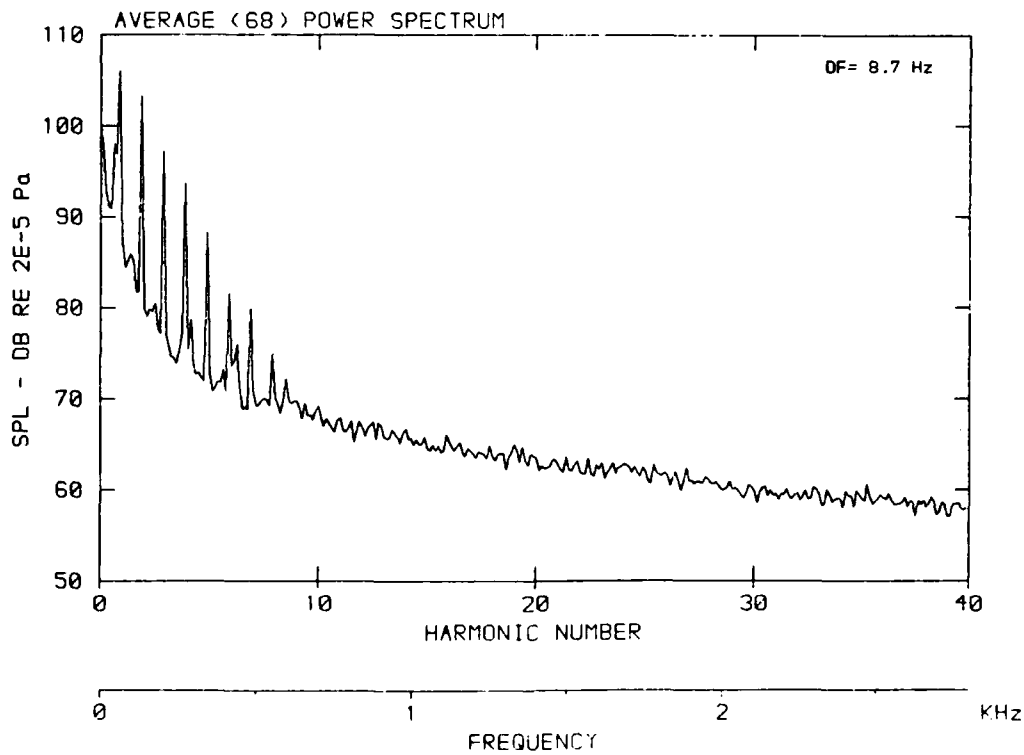
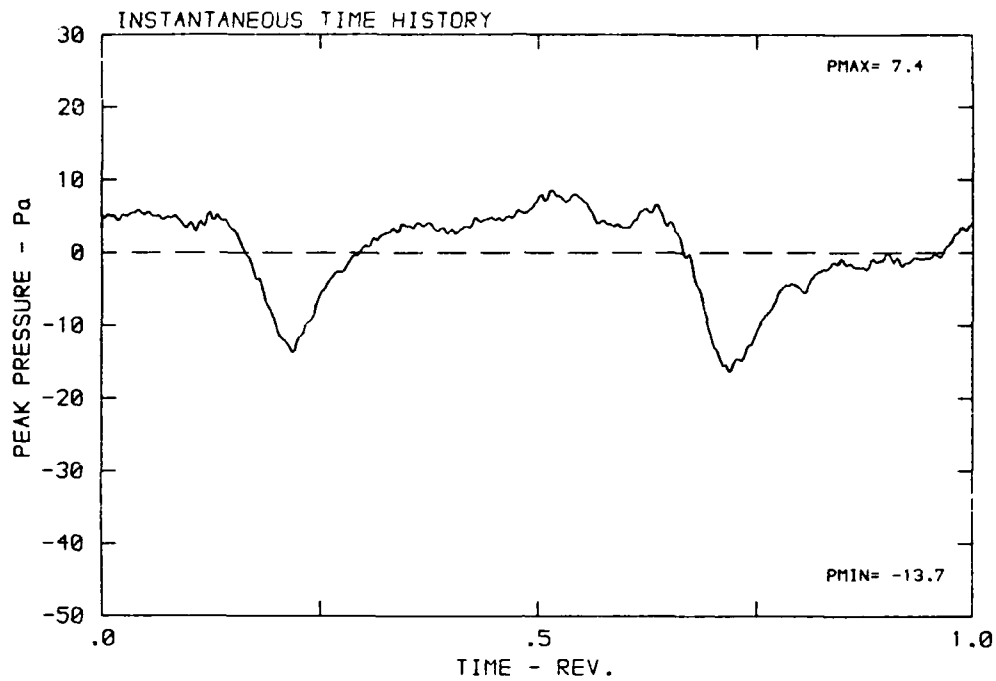
DATA POINT: LN-5 RUN: 158 MP: 1

β : 23.7° MH: .6751 n: 2100 rpm v/u : .230 ϕ : -3.8° T: 286.9 K



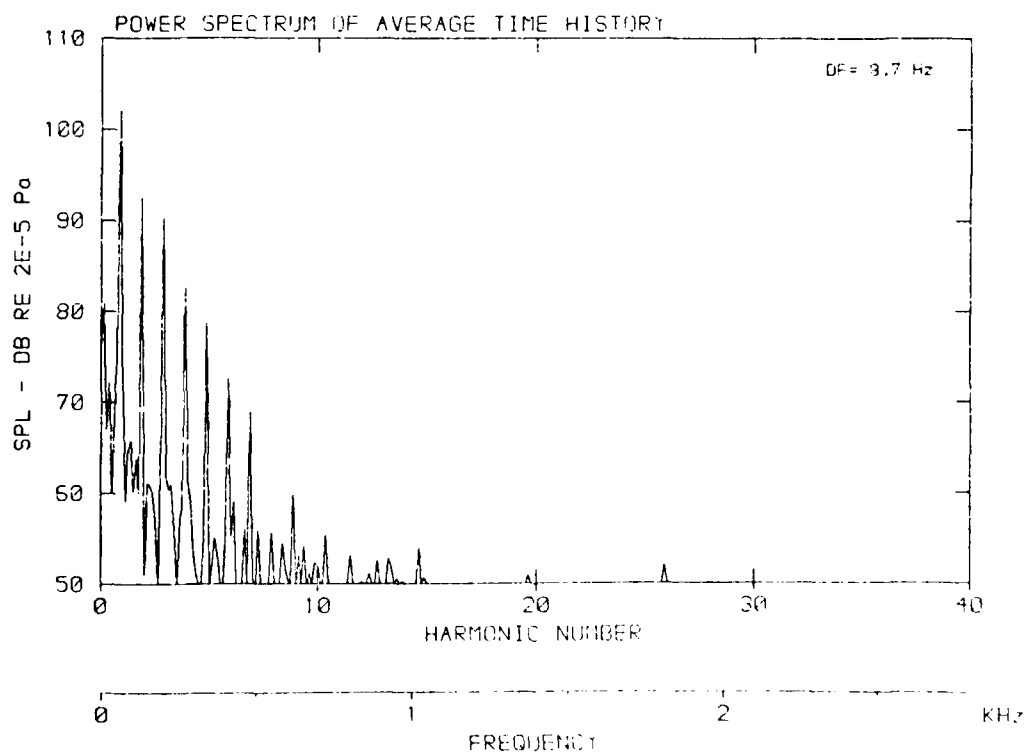
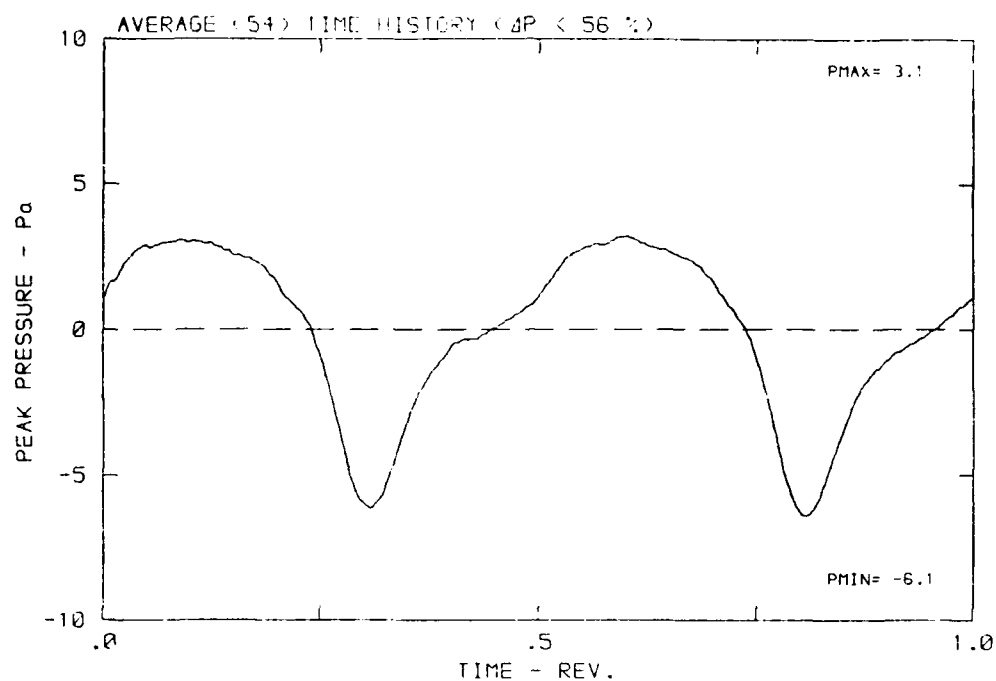
DATA POINT: LN-5 RUN: 158 MP: 2

β : 23.7° MH: .6751 n: 2100 rpm v/u : .230 ϕ : -3.8° T: 286.9 K



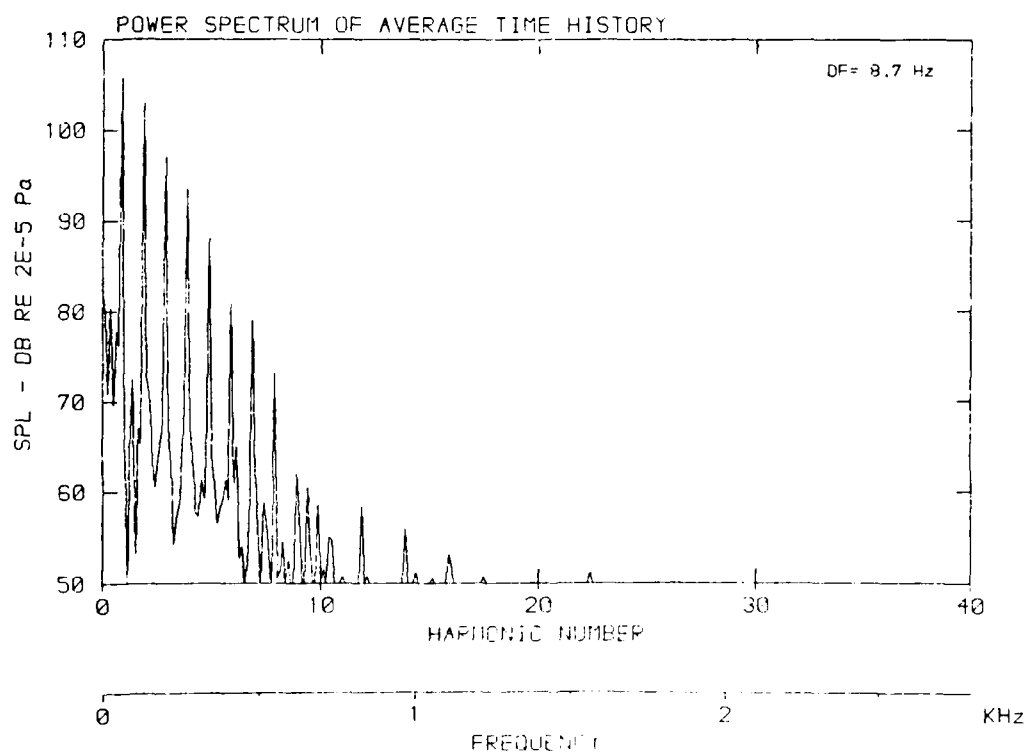
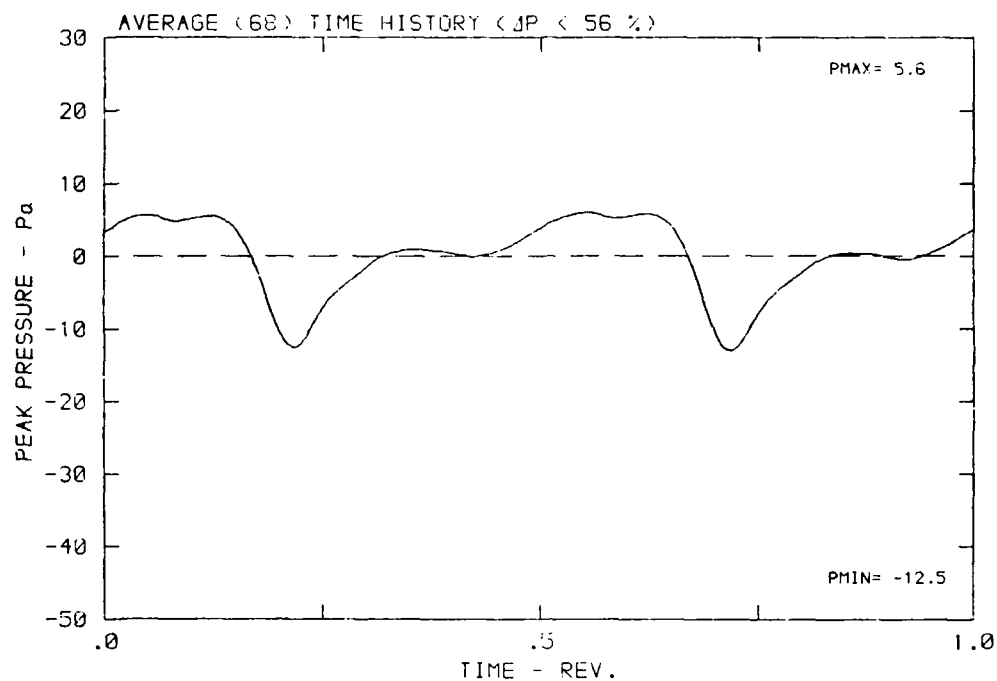
DATA POINT: LN-5 RUN: 158 MP: 1

β : 23.7° MH: .6751 n: 2100 rpm ν : .230 ϕ : -3.2° T: 286.9 K



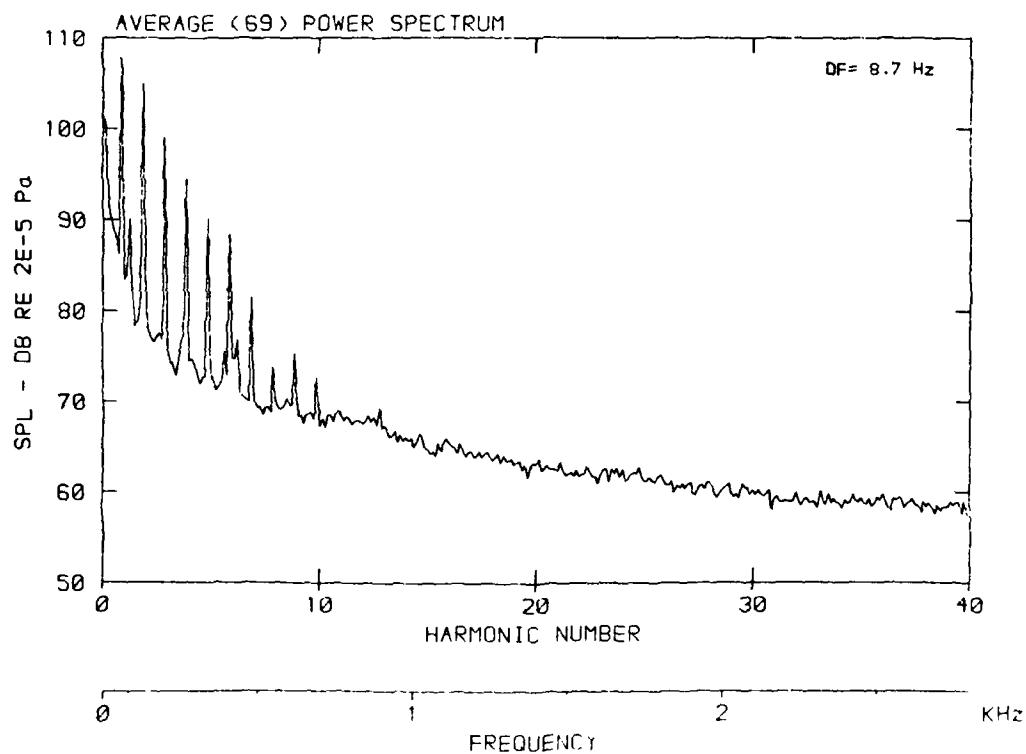
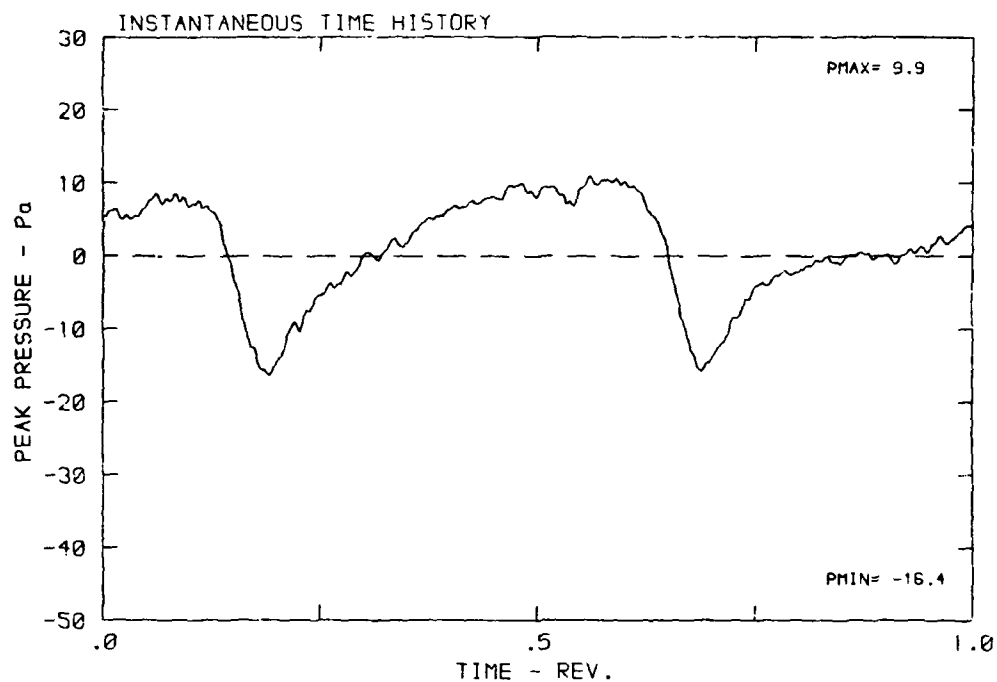
DATA POINT: LN-5 RUN: 158 MP: 2

β : 23.7° MH: .6751 n: 2100 rpm v/u: .230 ϕ : -3.8° T: 286.9 K



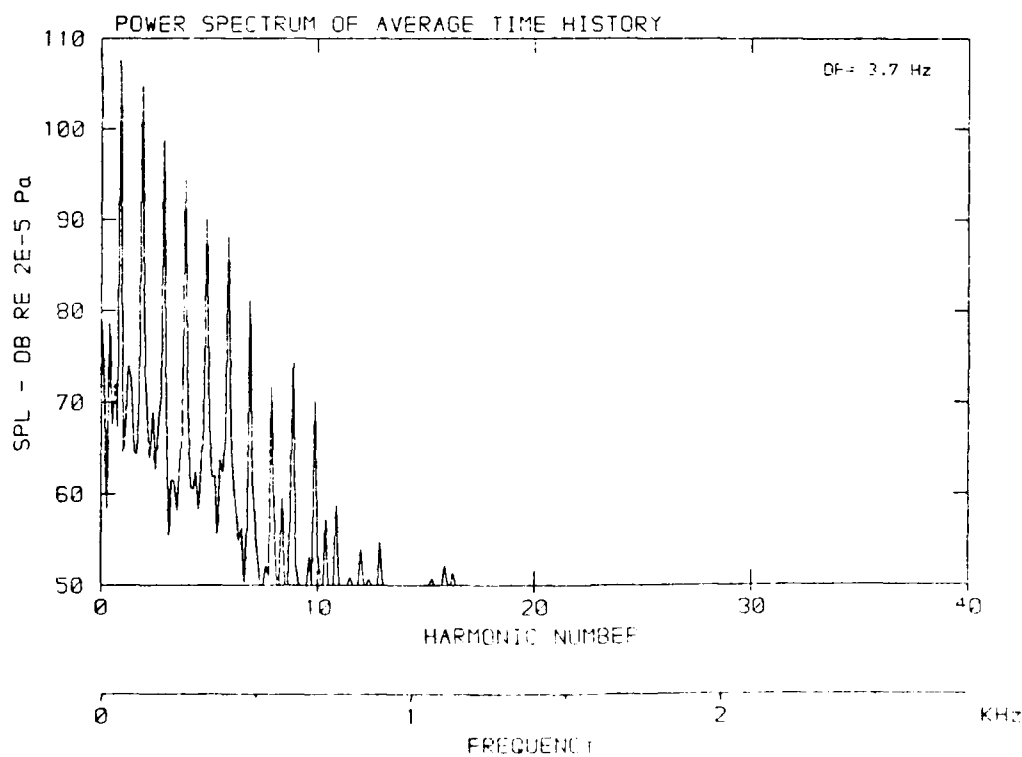
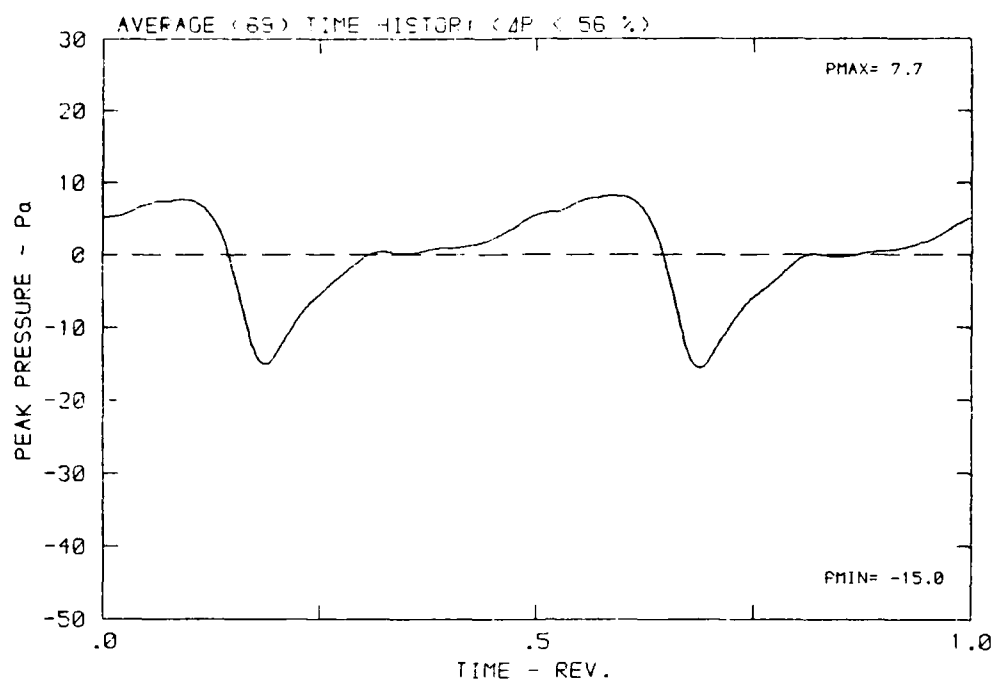
DATA POINT: LN-5 RUN: 158 MP: 3

β : 23.7° MH: .6751 n: 2100 rpm v/u: .230 ϕ : -3.8° T: 286.9 K



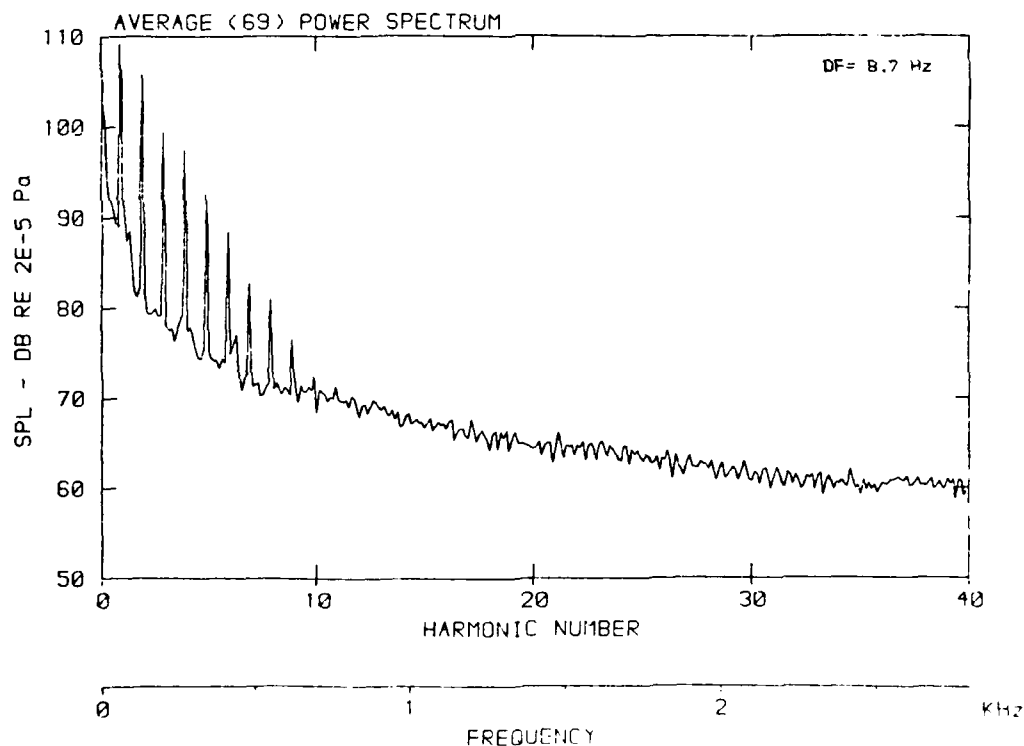
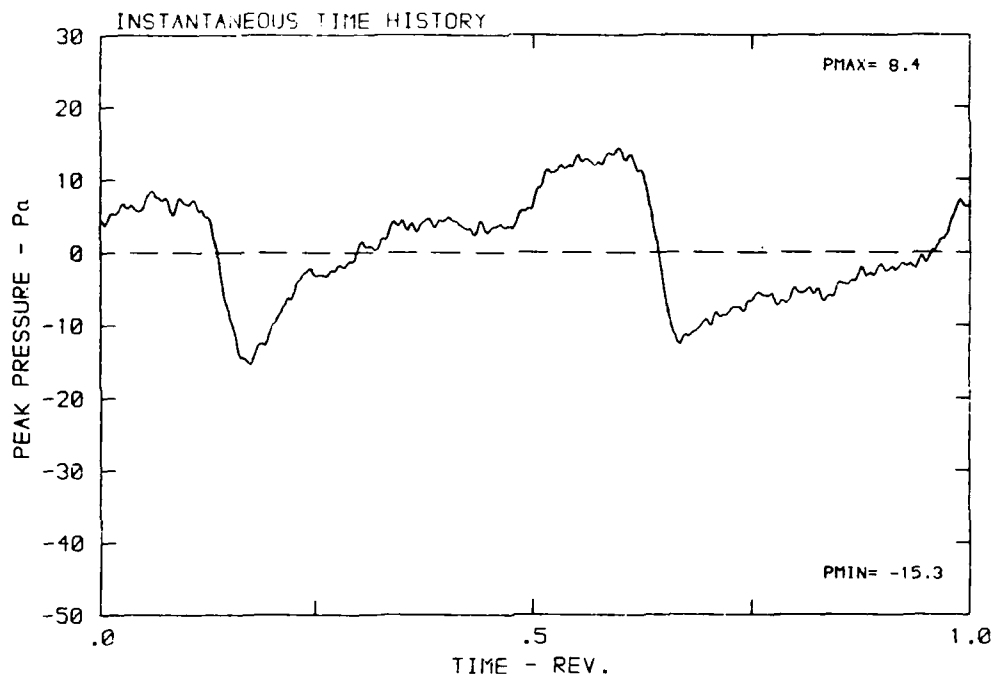
DATA POINT: LN-5 RUN: 158 MP: 3

β : 23.7° MH: .6751 n: 2100 rpm vru: .230 ϕ : -3.8° T: 286.9



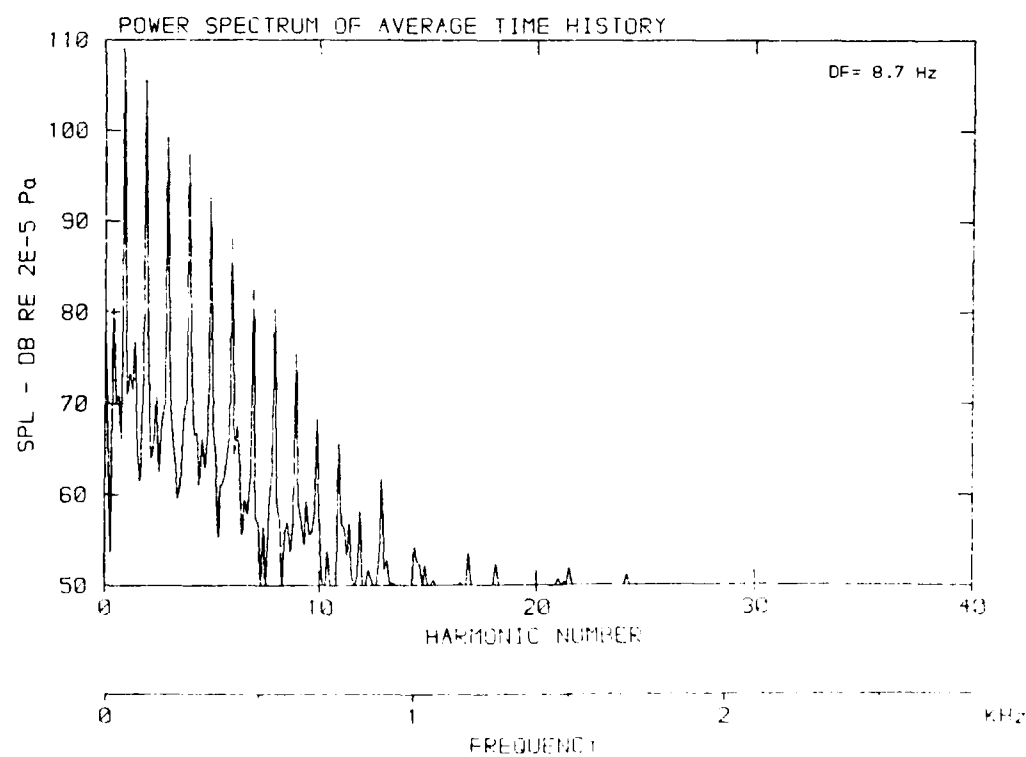
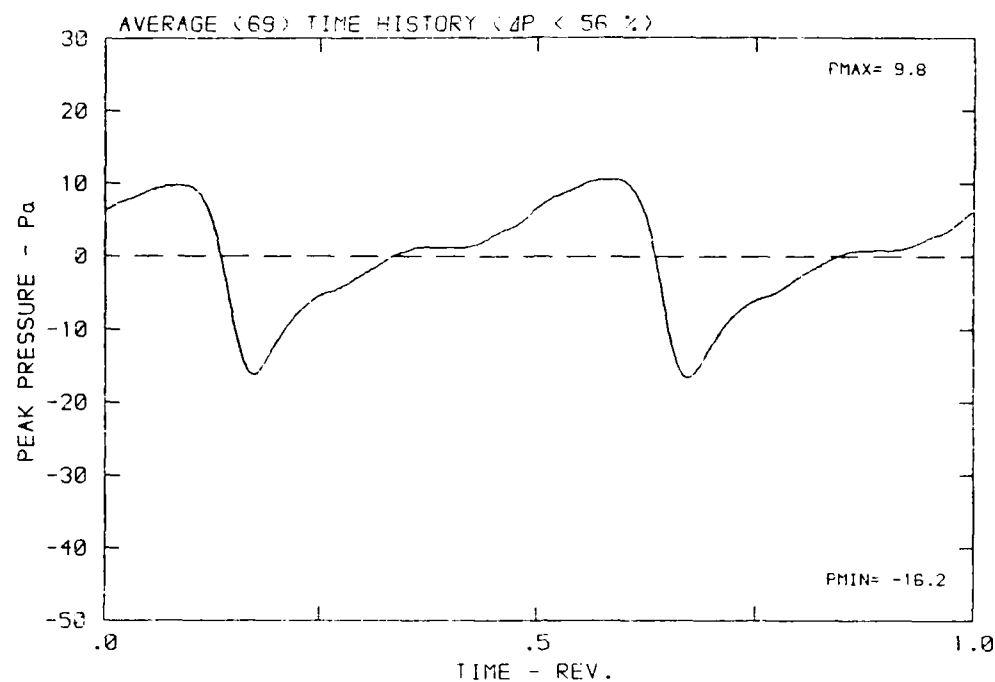
DATA POINT: LN-5 RUN: 158 MP: 4

β : 23.7° MH: .6751 n: 2100 rpm v/u : .230 ϕ : -3.8° T: 286.9 K



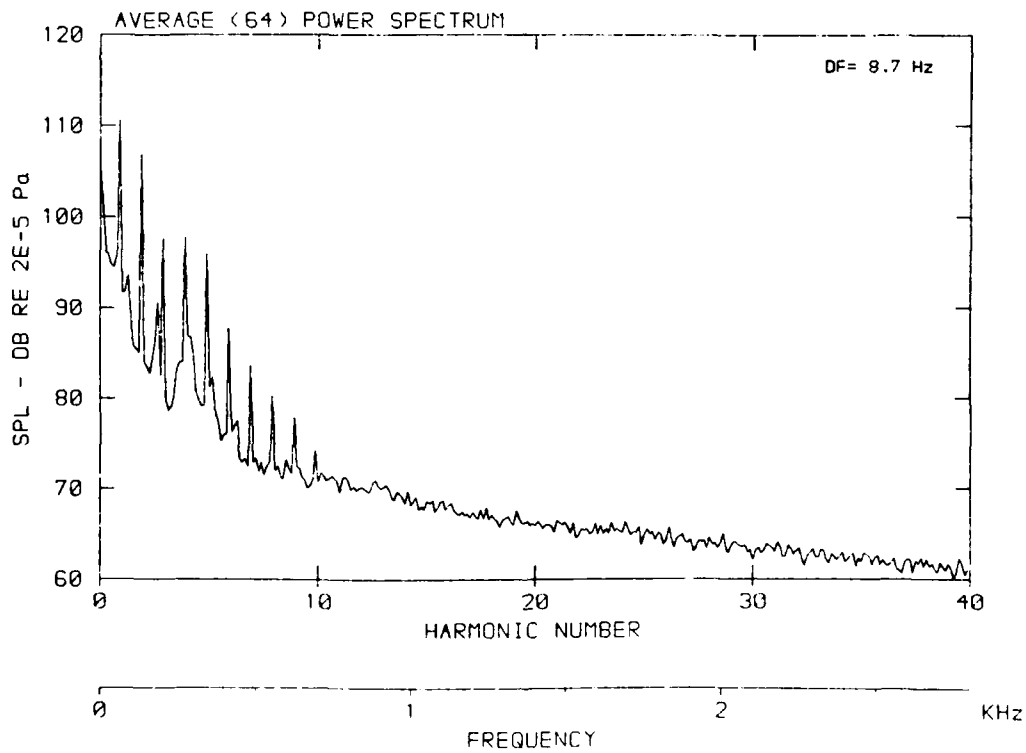
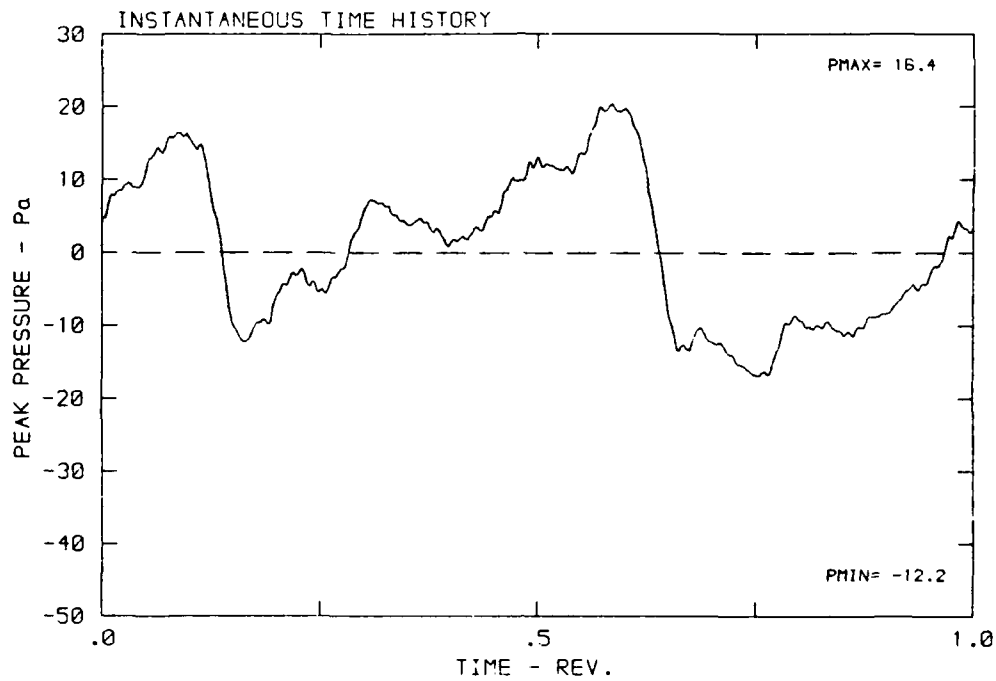
DATA POINT: LN-5 RUN: 158 MF: 4

β : 23.7° MH: .6751 n: 2100 rpm v/u : .230 ϕ : -3.8° T: 286.9 K



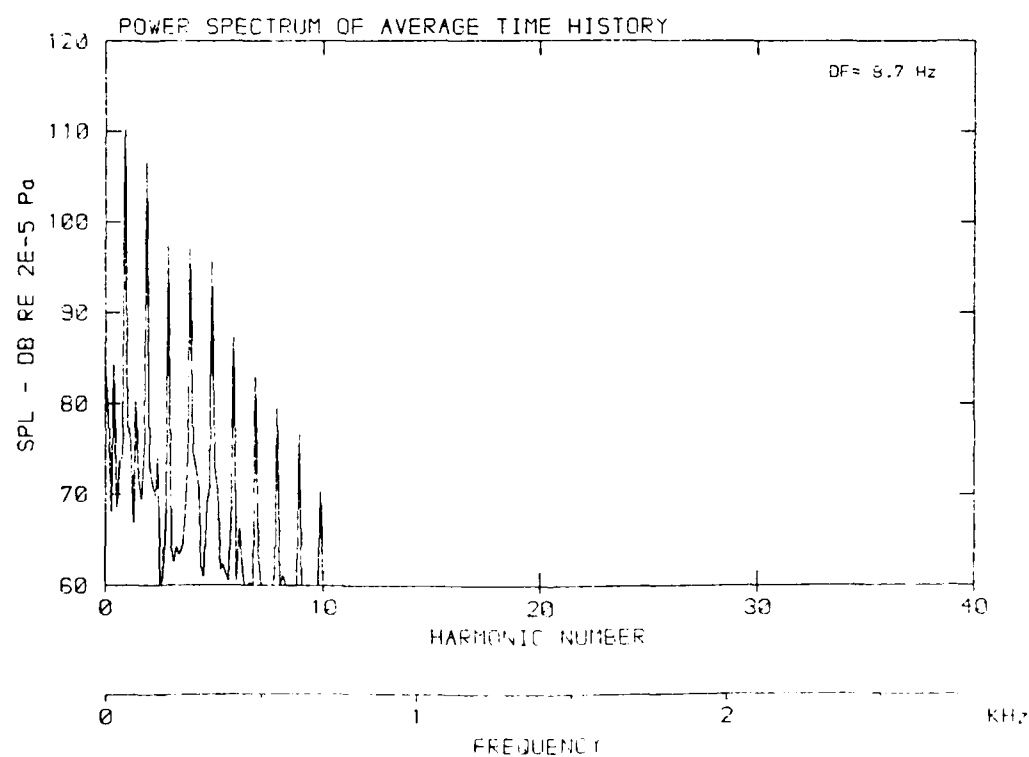
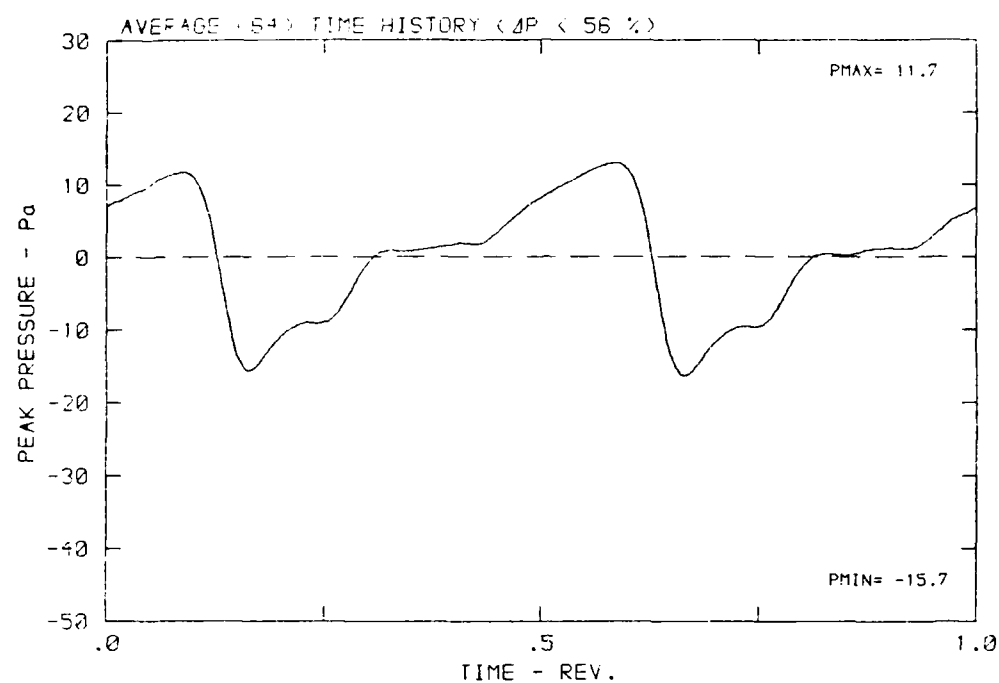
DATA POINT: LN-5 RUN: 158 MP: 5

β : 23.7° MH: .6751 n: 2100 rpm v/u: .230 ϕ : -3.8° T: 286.9 K



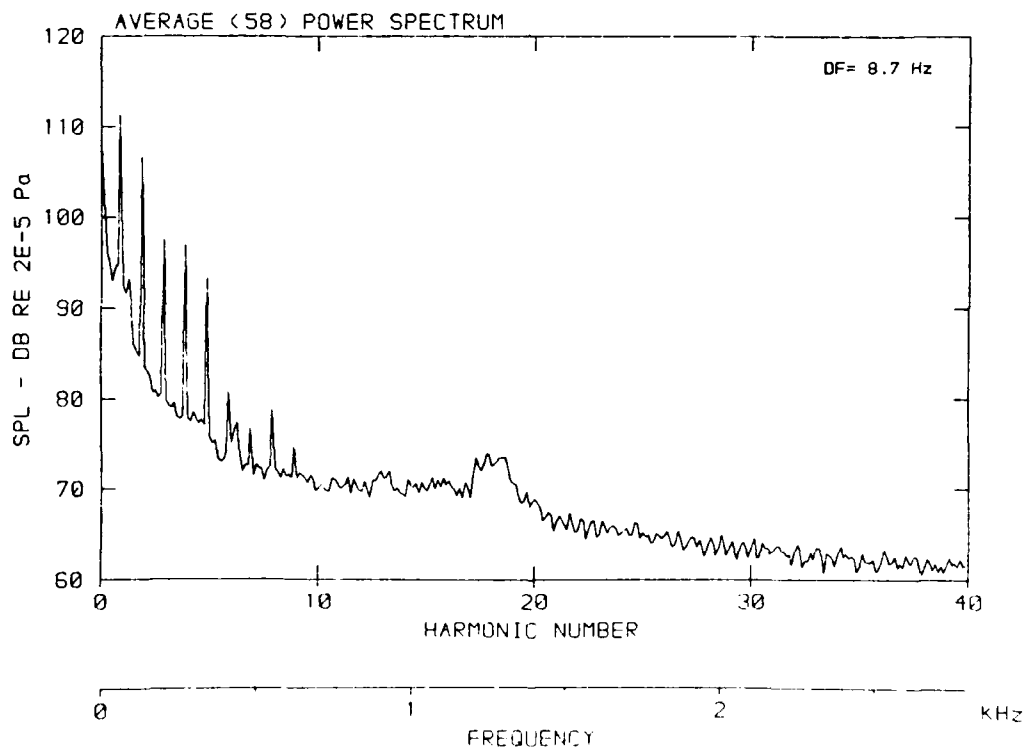
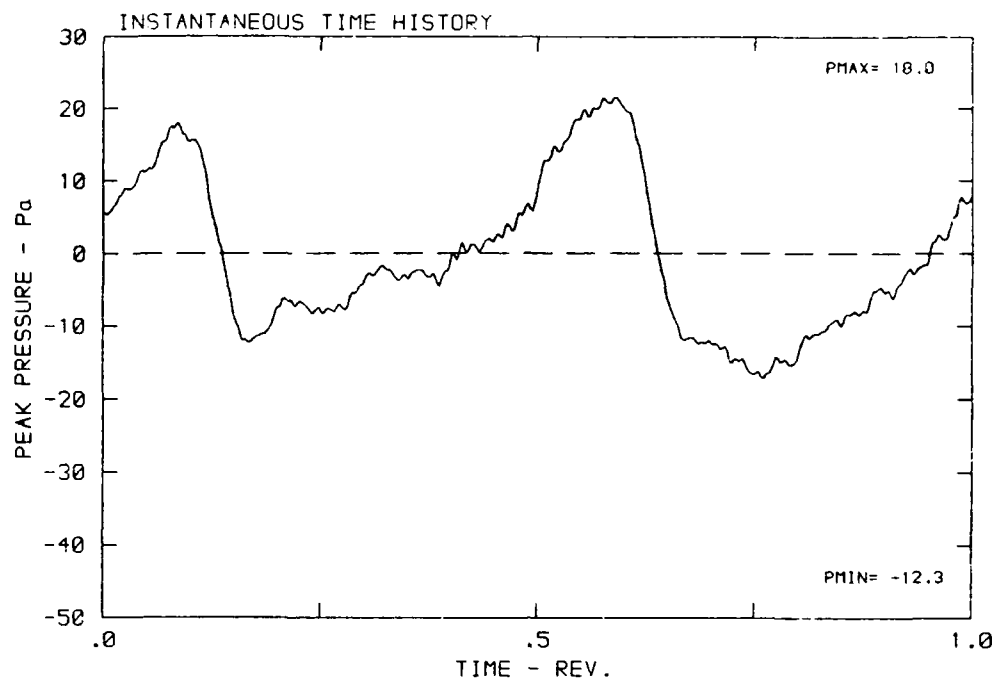
DATA POINT: LN-5 RUN: 158 MP: 5

β : 23.7° MH: .8751 n: 2100 rpm v/u : .230 ϕ : -3.8° T: 285.9 K



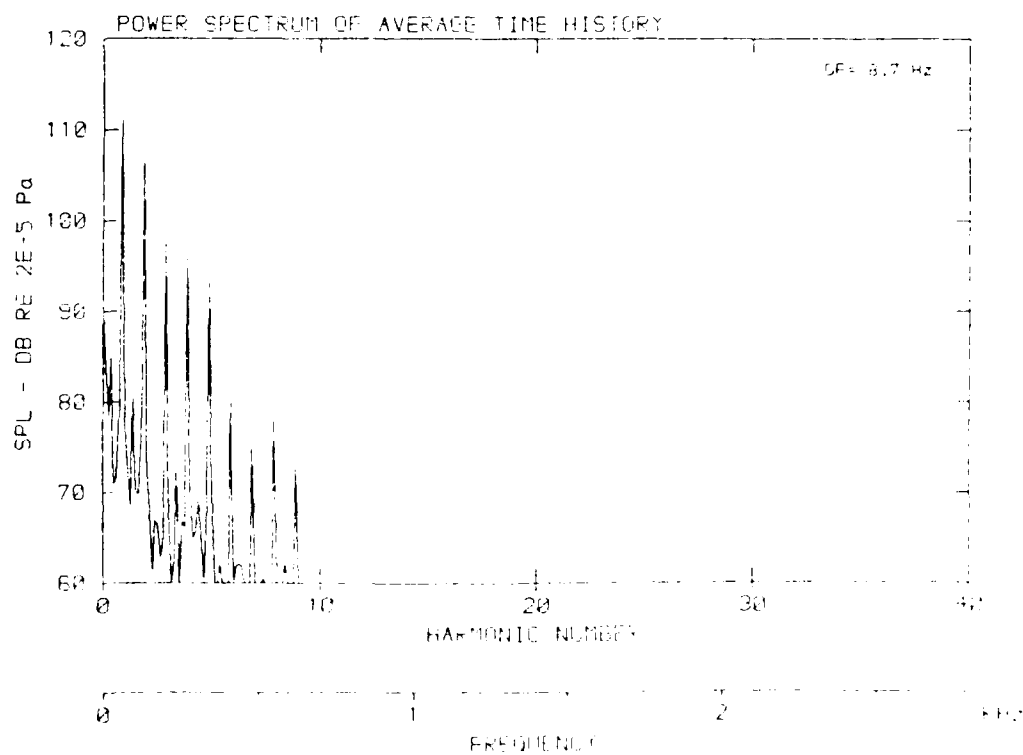
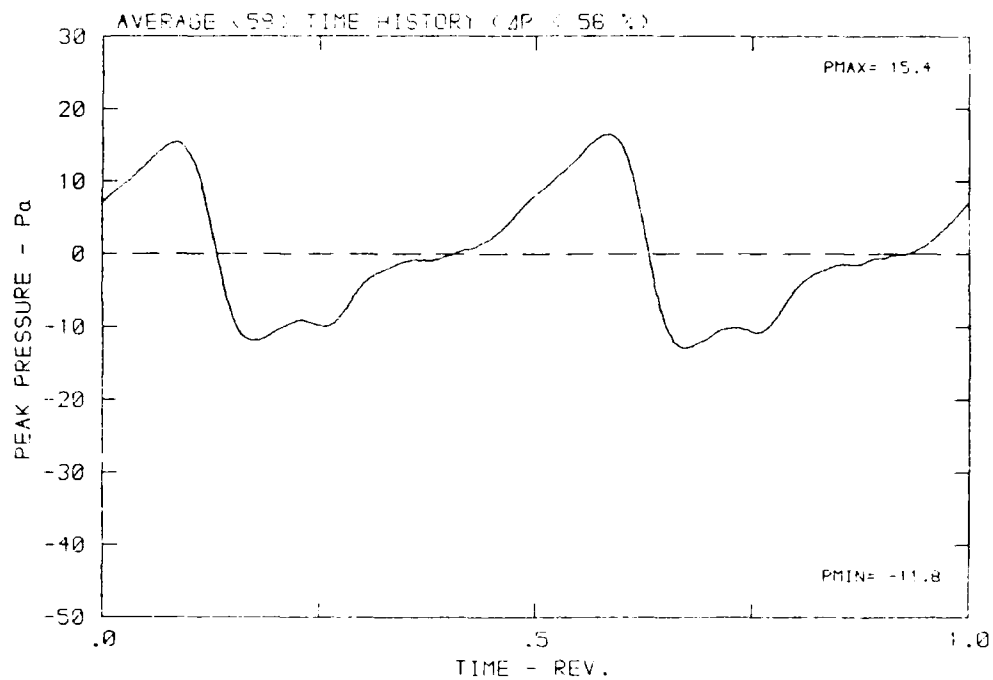
DATA POINT: LN-5 RUN: 156 MF: 6

β : 23.7° MH: .6751 n: 2100 rpm v_u : .230 ϕ : -3.9° T: 286.9 K



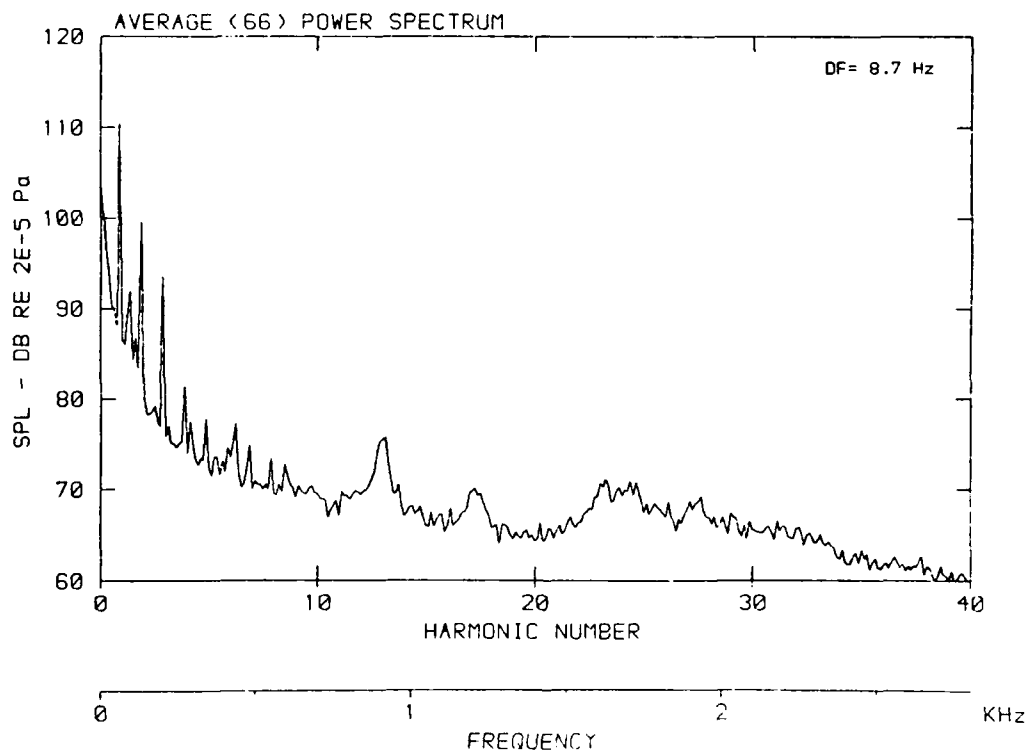
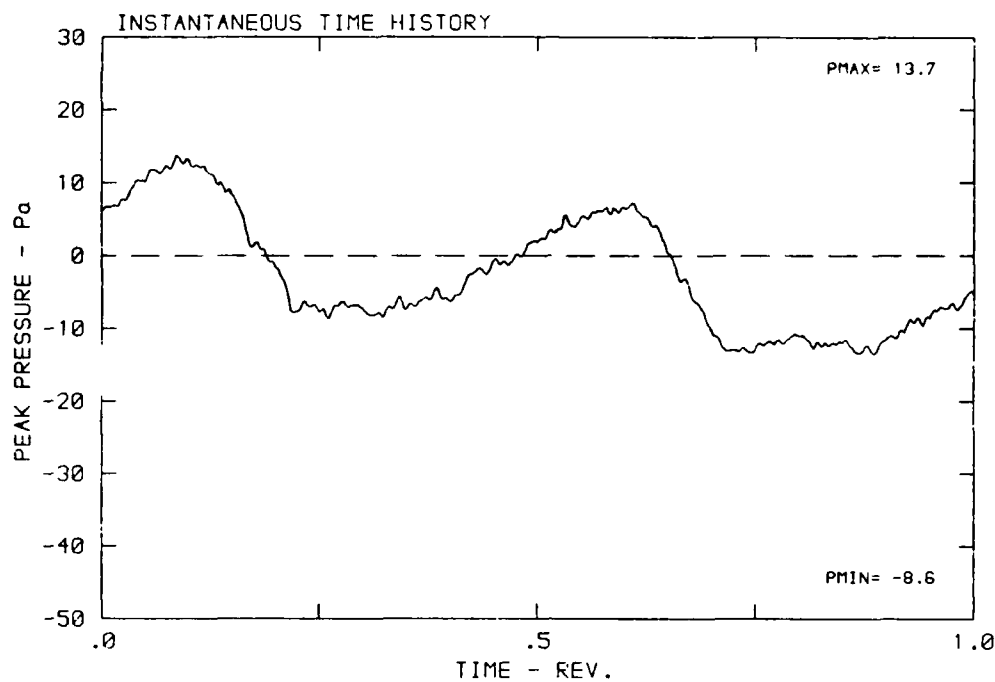
DATA POINT: LN-5 PUN: 156 MP: 6

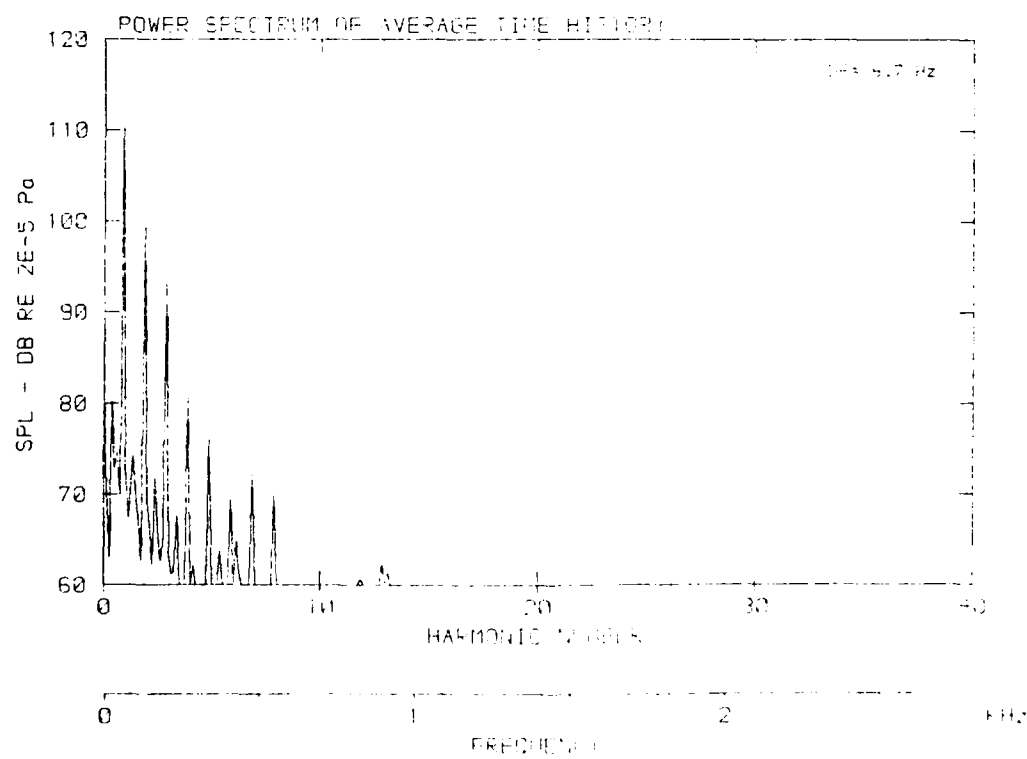
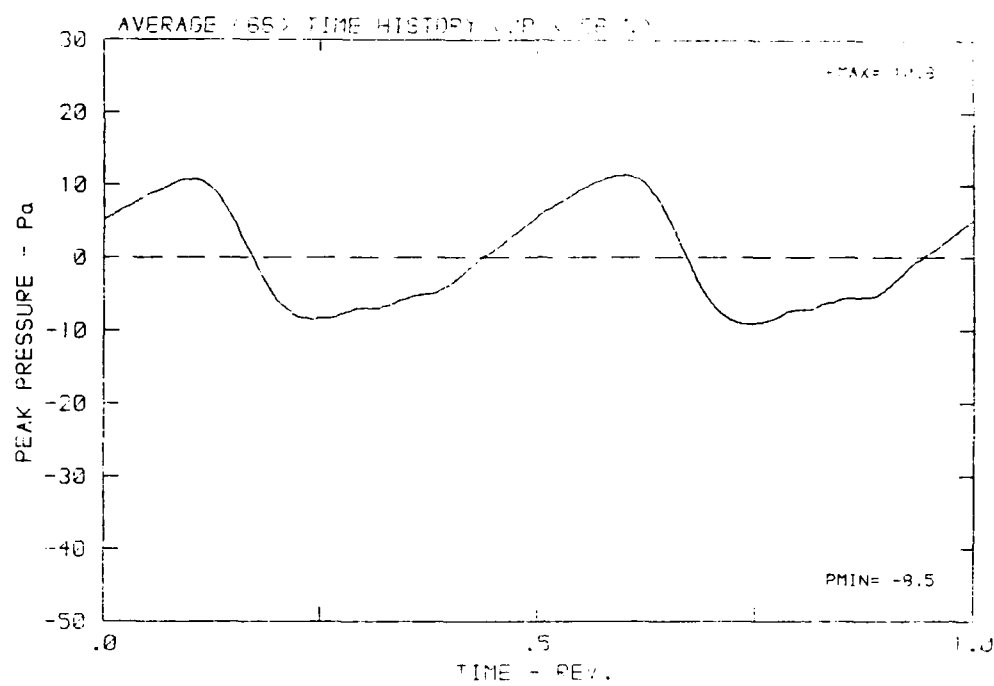
β : 23.7° MH: .6751 n: 2100 rpm vru: .230 ϕ : -3.3° T: 186.9 K



DATA POINT: LN-5 RUN: 158 MP: 7

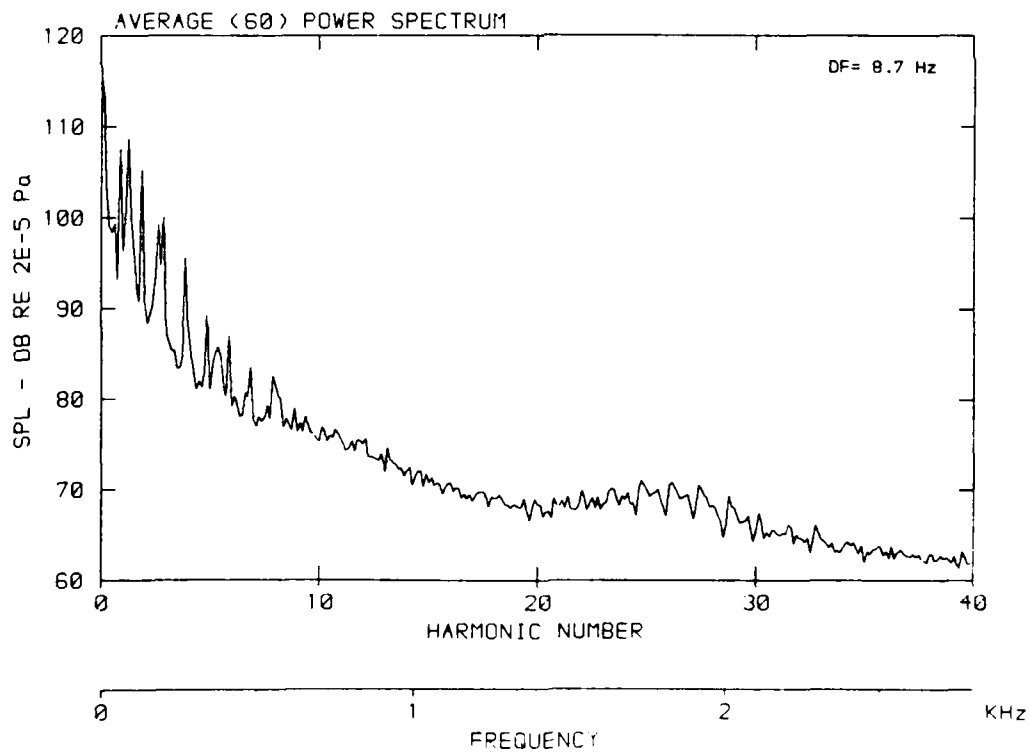
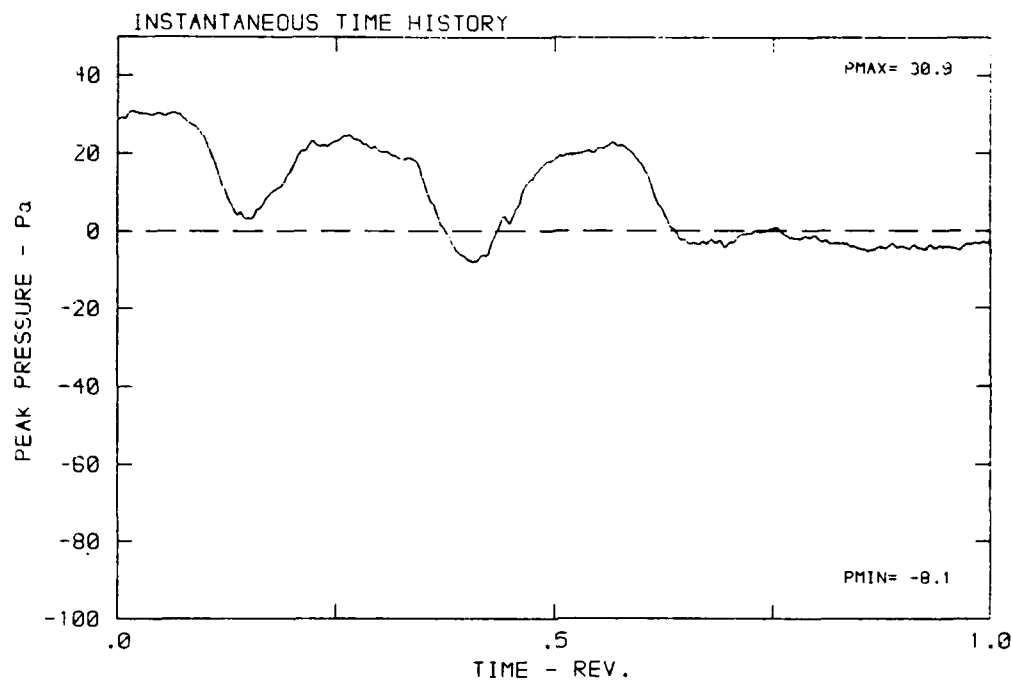
β : 23.7° MH: .6751 n: 2100 rpm v/u: .230 ϕ : -3.8° T: 286.9 K



$$\beta: 23.7^\circ \quad \text{MH: } .6751 \quad a: 2100 \text{ cm}^{-1} \quad \nu_{\text{max}}: 1210 \quad \mu: -3.9^{\text{D}} \quad \sigma: 116.1$$


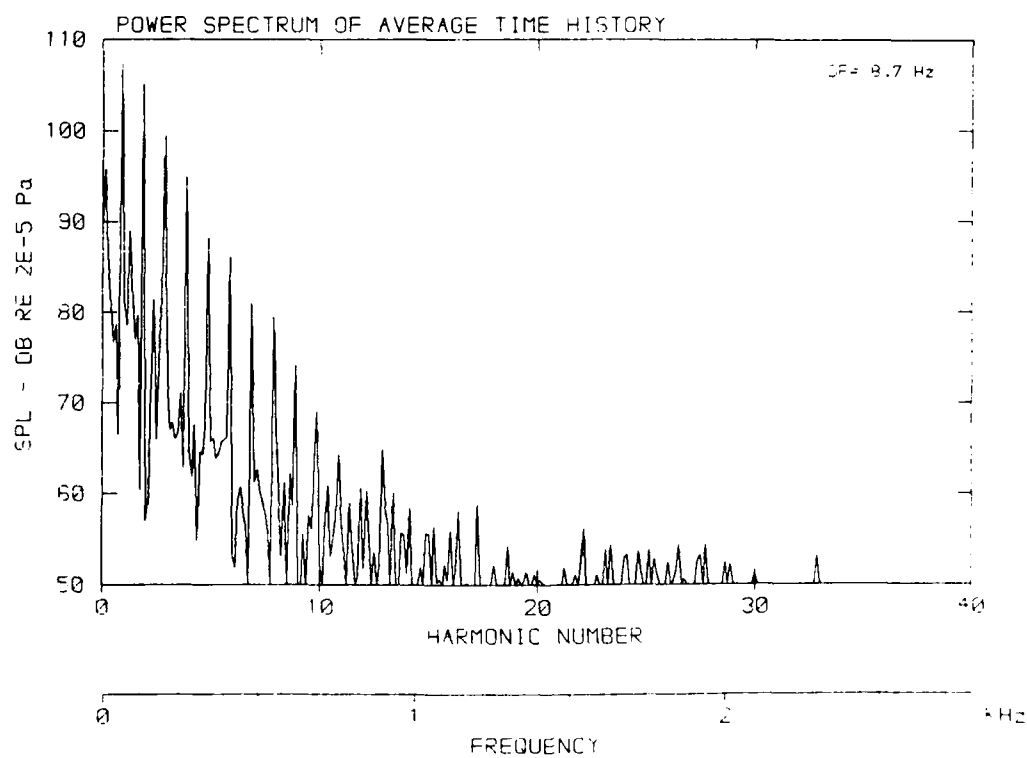
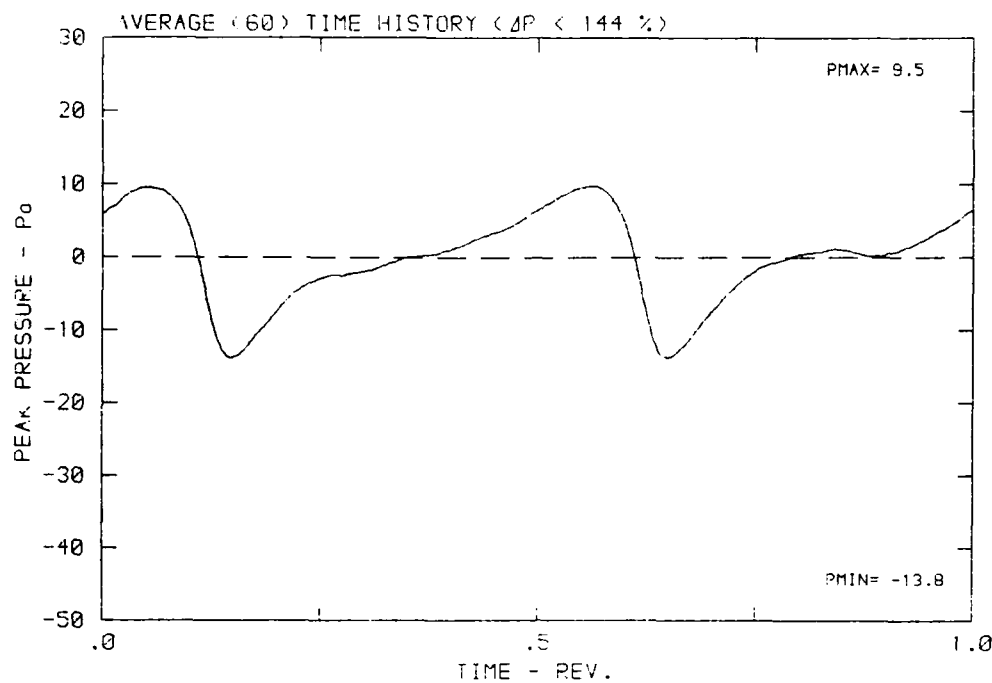
DATA POINT: LN-5 RUN: 158 MP: 9

β : 23.7° MH: .6751 n: 2100 rpm v/u : .230 ϕ : -3.3° T: 296.9 K



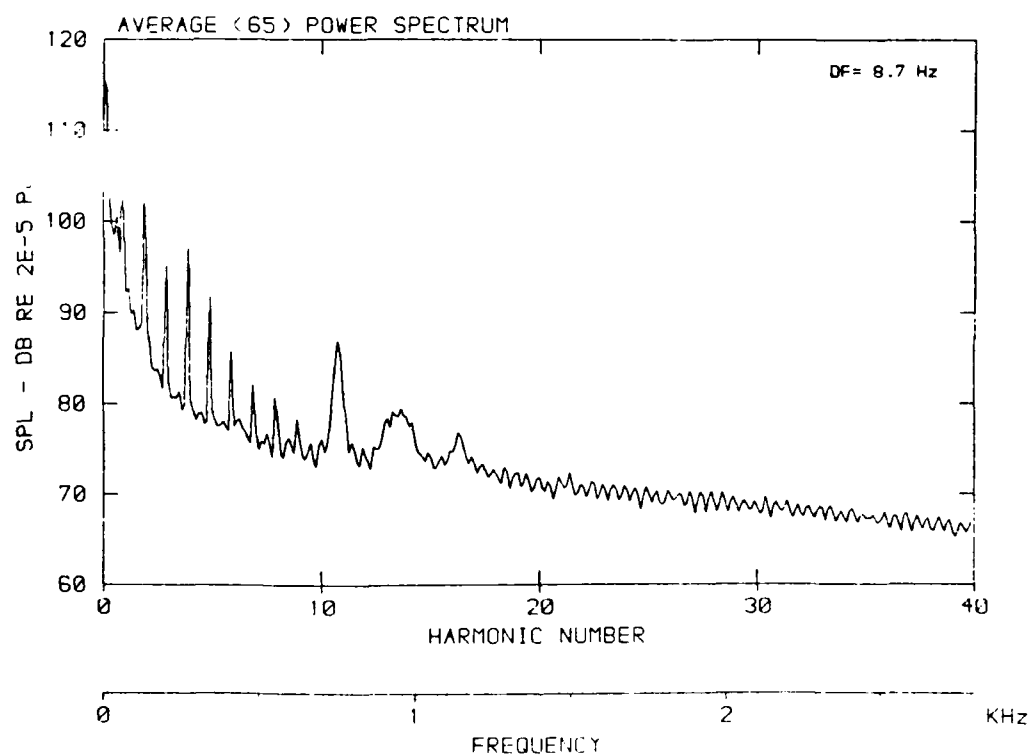
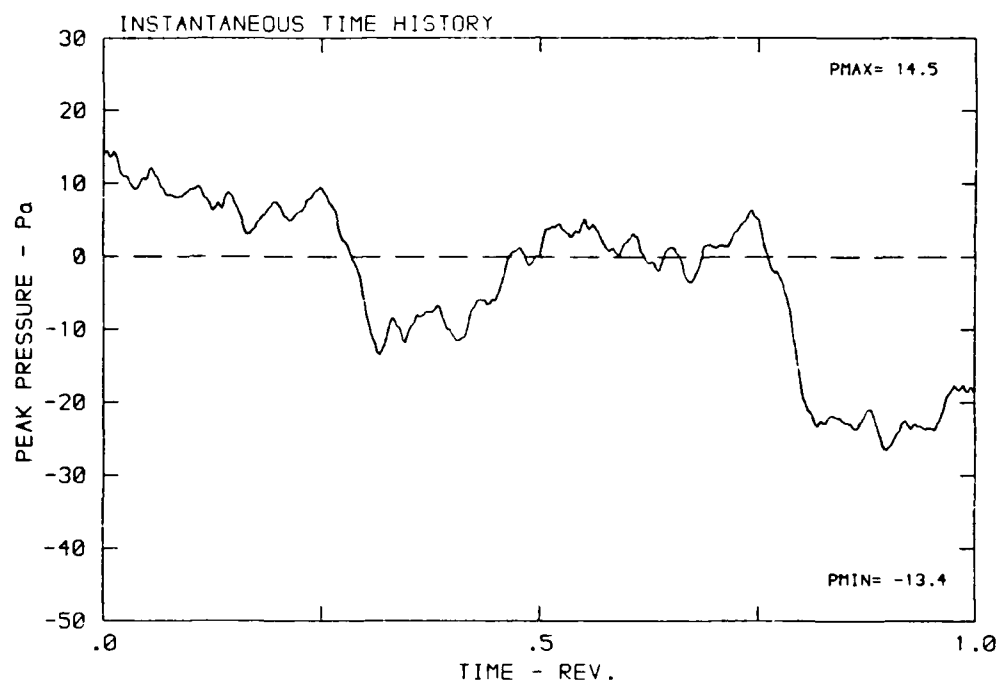
DATA POINT : LN-5 RUN : 158 MP : 8

β : 23.7° MH: .6751 n: 2100 rpm v/u: .230 ϕ : -3.8° T: 286.9 K



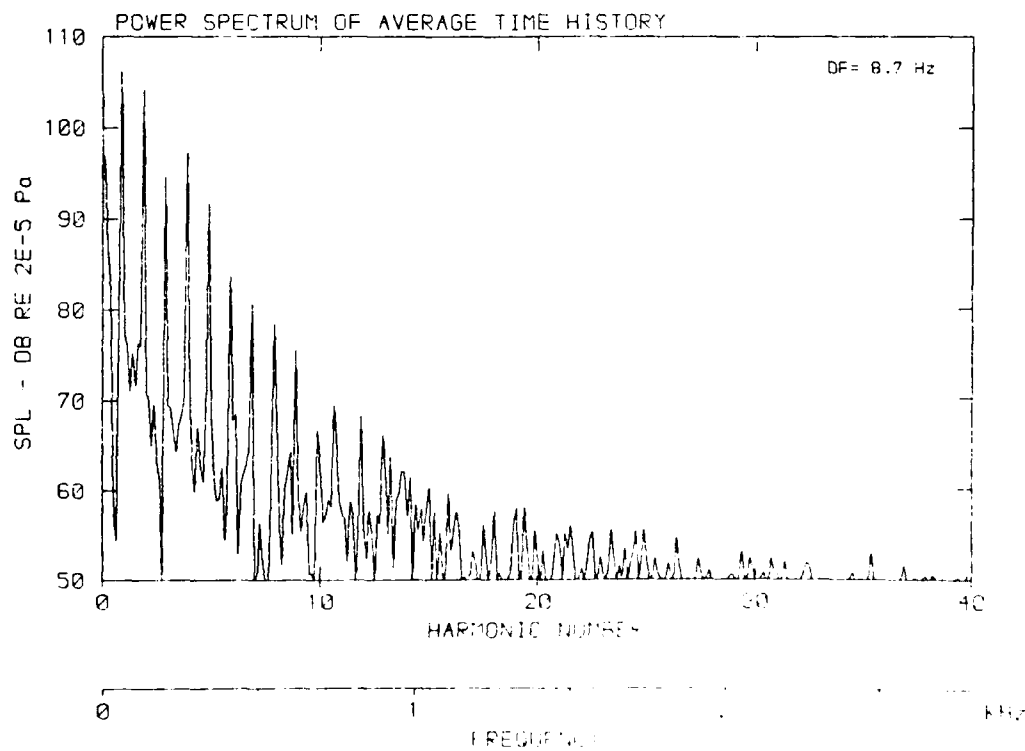
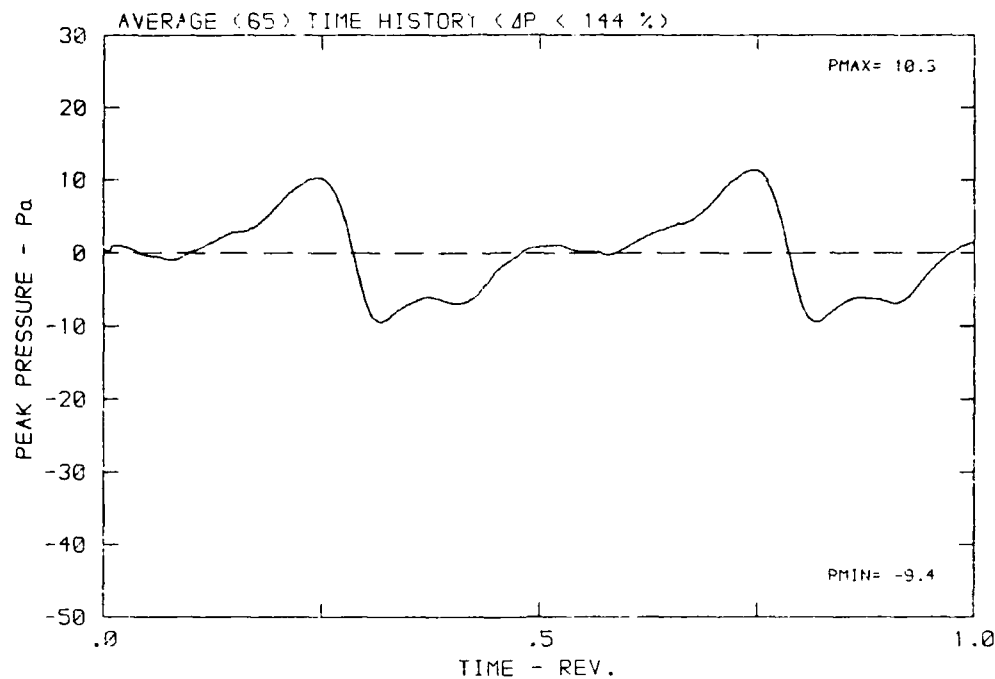
DATA POINT: LN-5 RUN: 158 MP: 9

β : 23.7° MH: .6751 n: 2100 rpm v/u: .230 ϕ : -3.8° T: 286.9 K



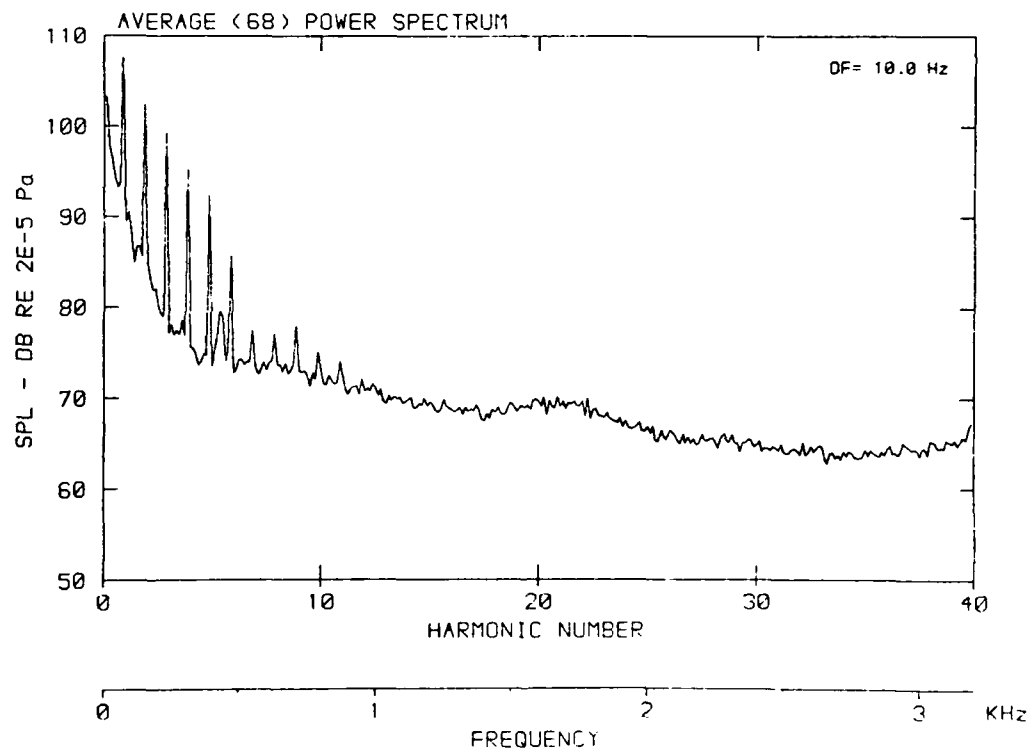
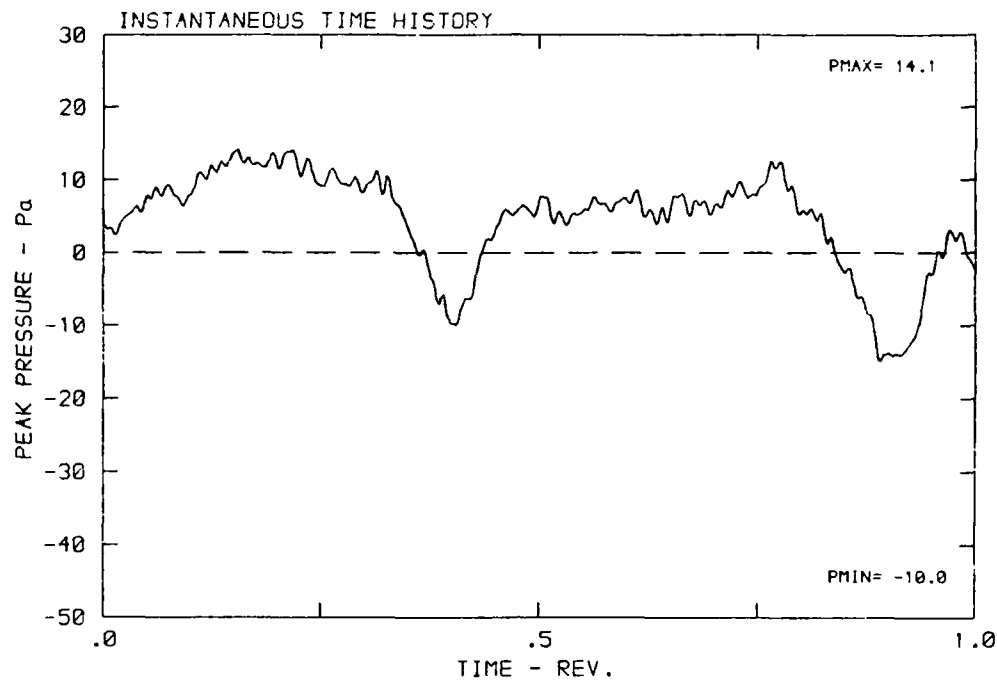
DATA POINT: LN-5 RUN: 158 MF: 9

β : 23.7° MH: .6751 n: 2100 rpm v/u : .230 ϕ : -3.8° T: 285.9 K



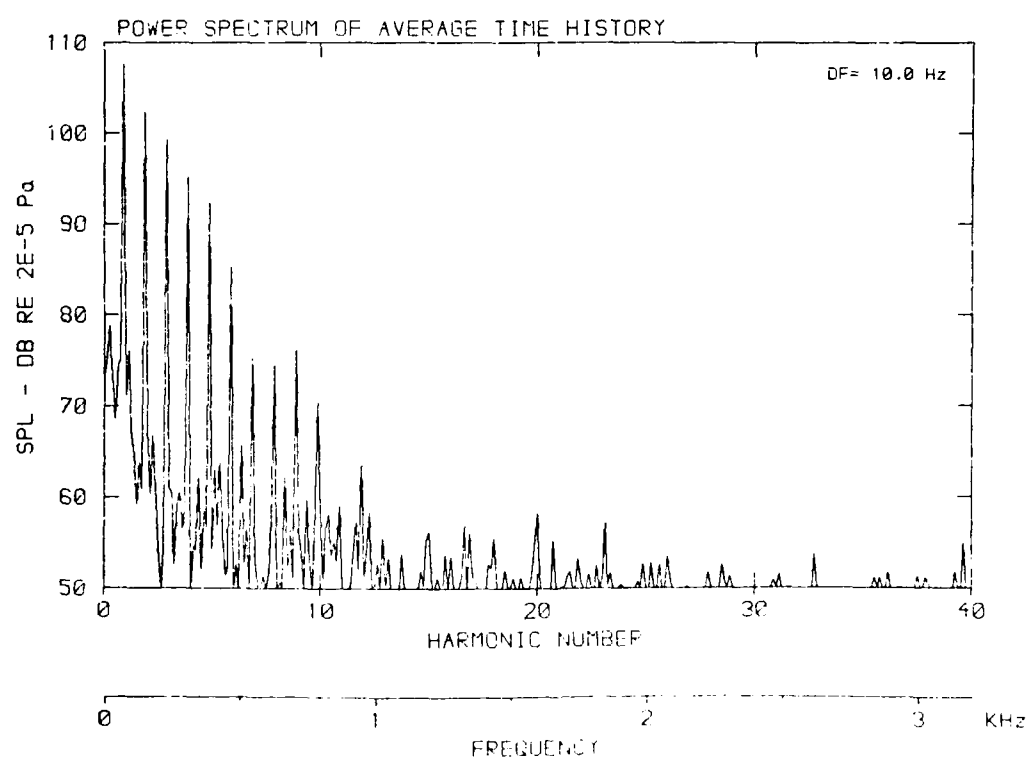
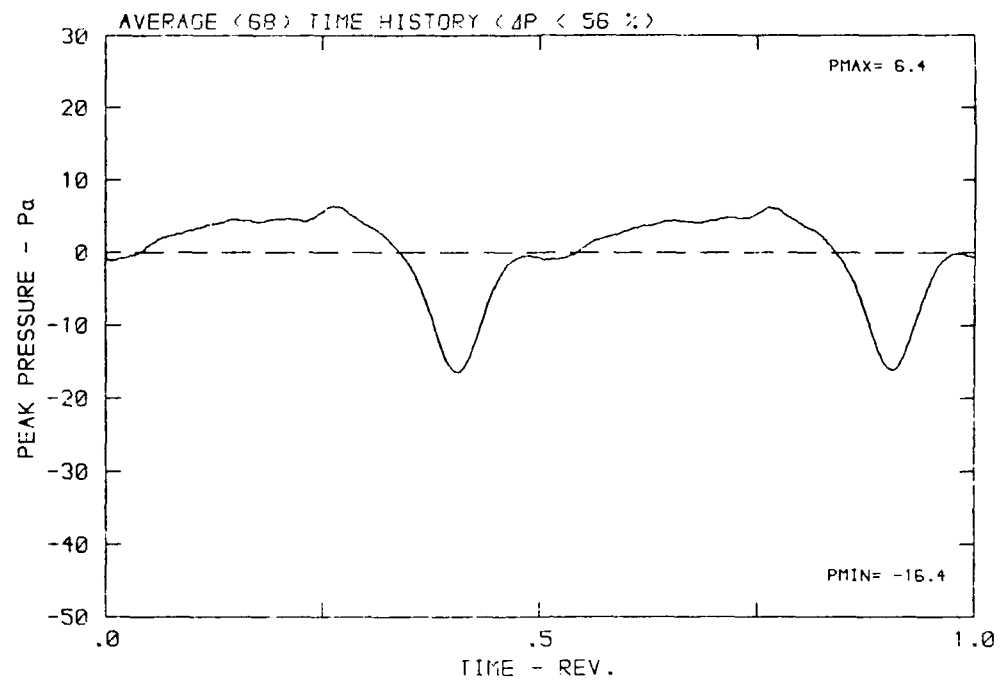
DATA POINT: LN-6 RUN: 159 MP: 1

β : 23.7° MH: .7771 n: 2400 rpm v/u: .263 ϕ : -3.8° T: 287.2 K



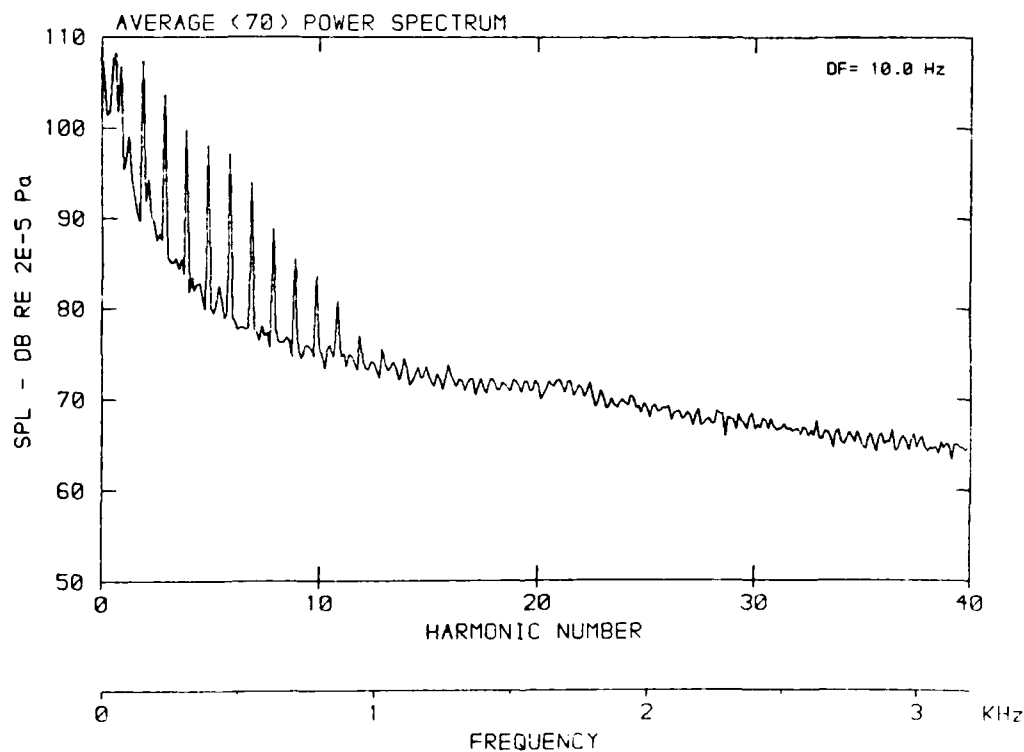
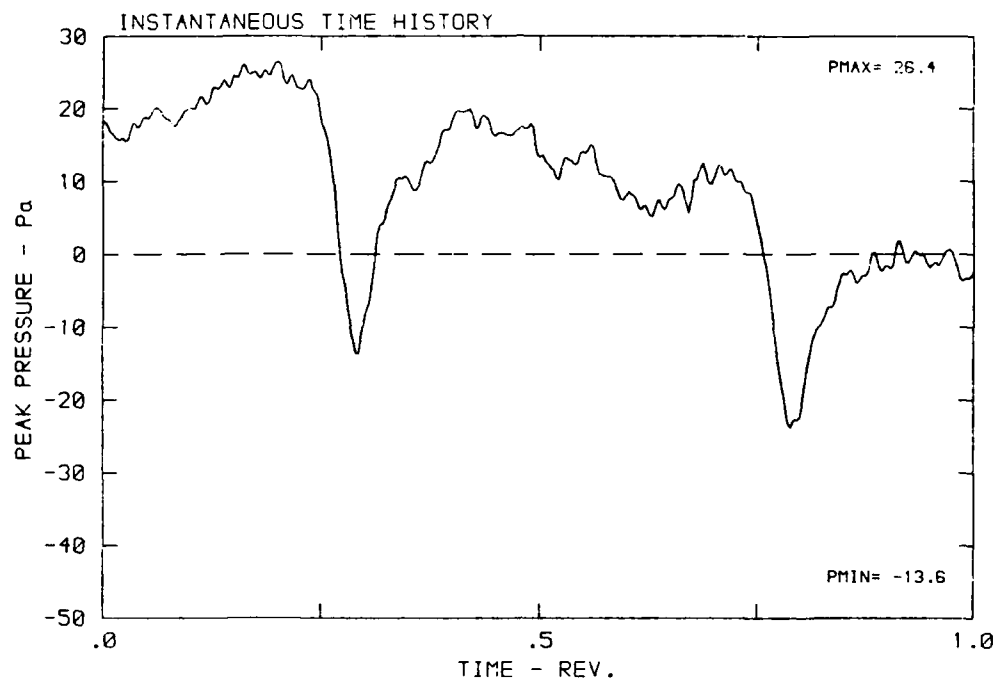
DATA POINT: LN-6 RUN: 159 MP: 1

β : 23.7° MH: .7771 n: 2400 rpm v/u: .263 ϕ : -3.8° T: 287.2 K



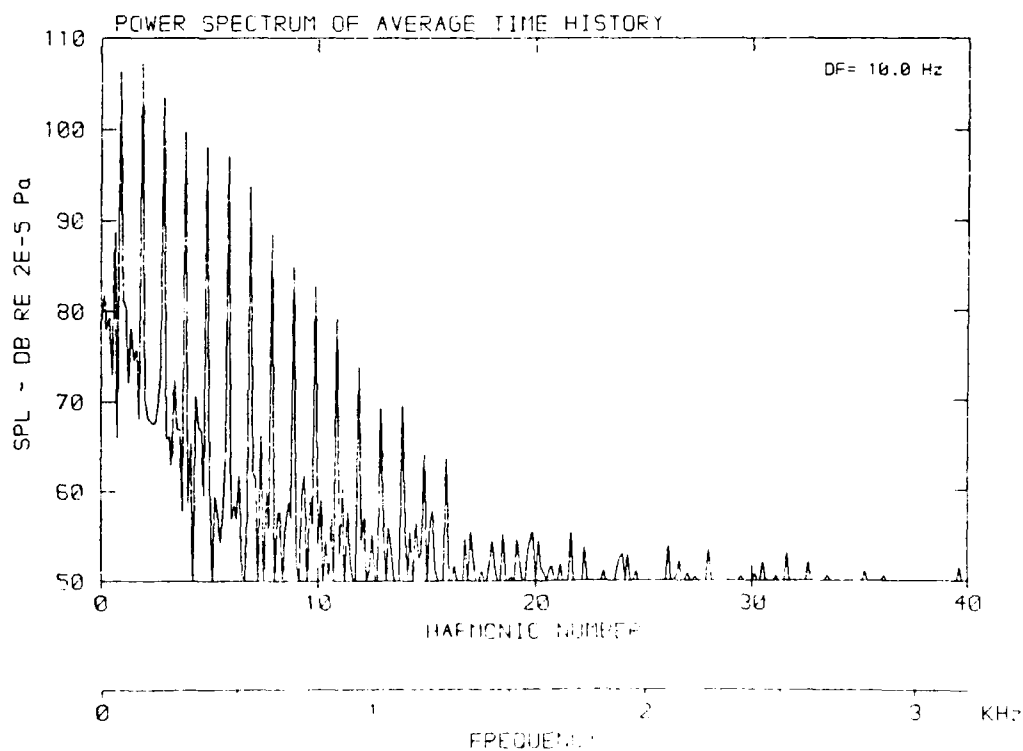
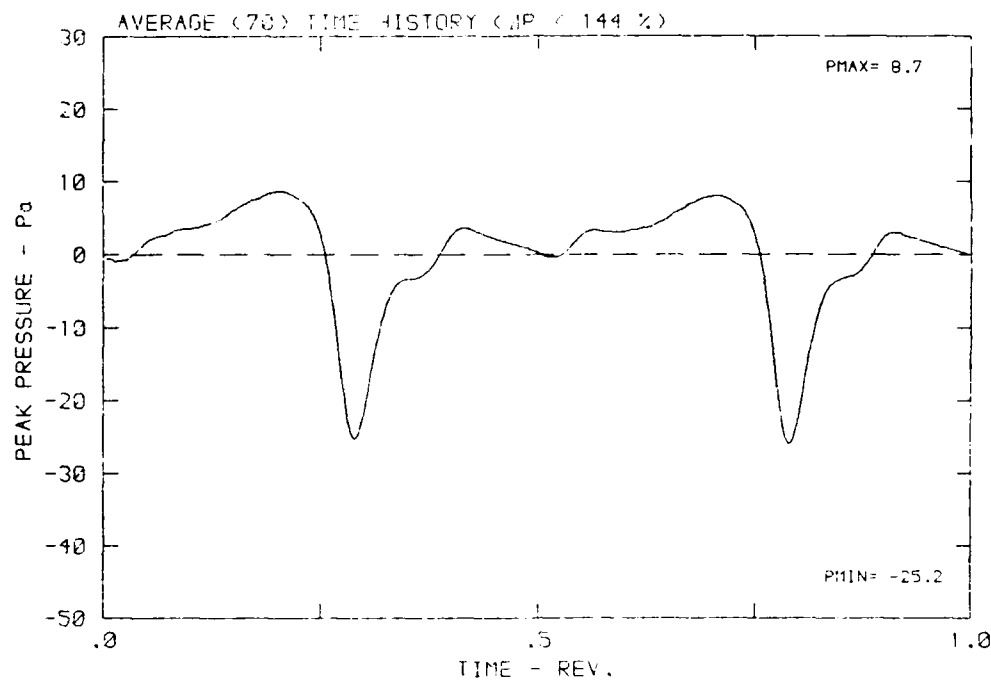
DATA POINT: LN-6 RUN: 159 MF: 2

β : 23.7° MH: .7771 n: 2400 rpm v/u : .263 ϕ : -3.8° T: 297.0 K



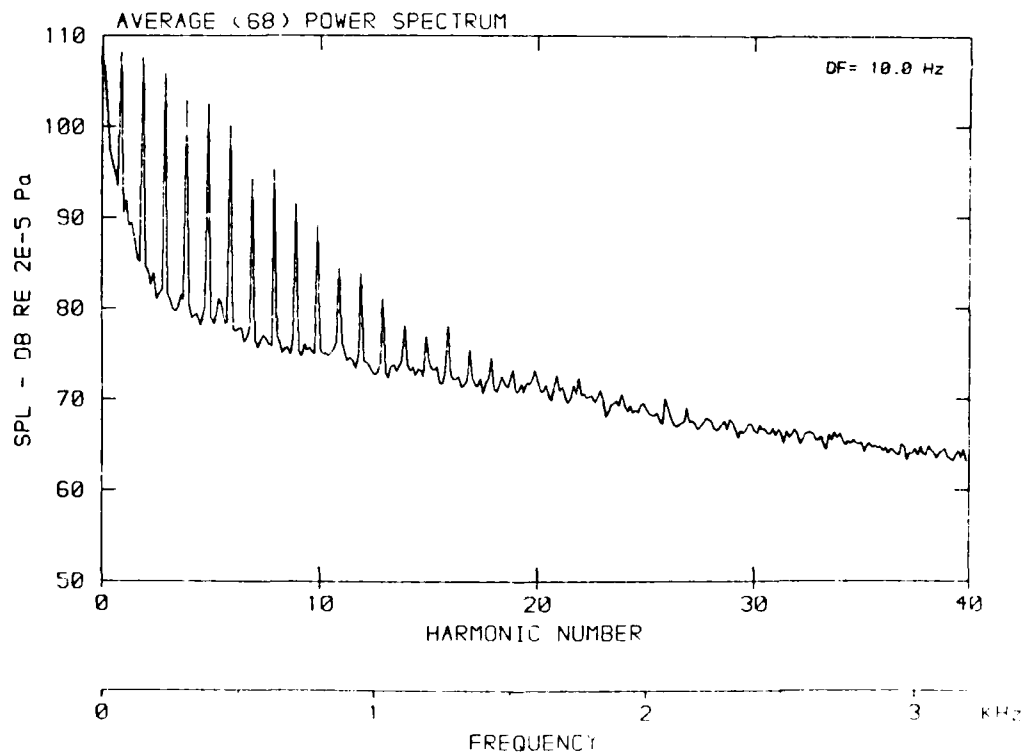
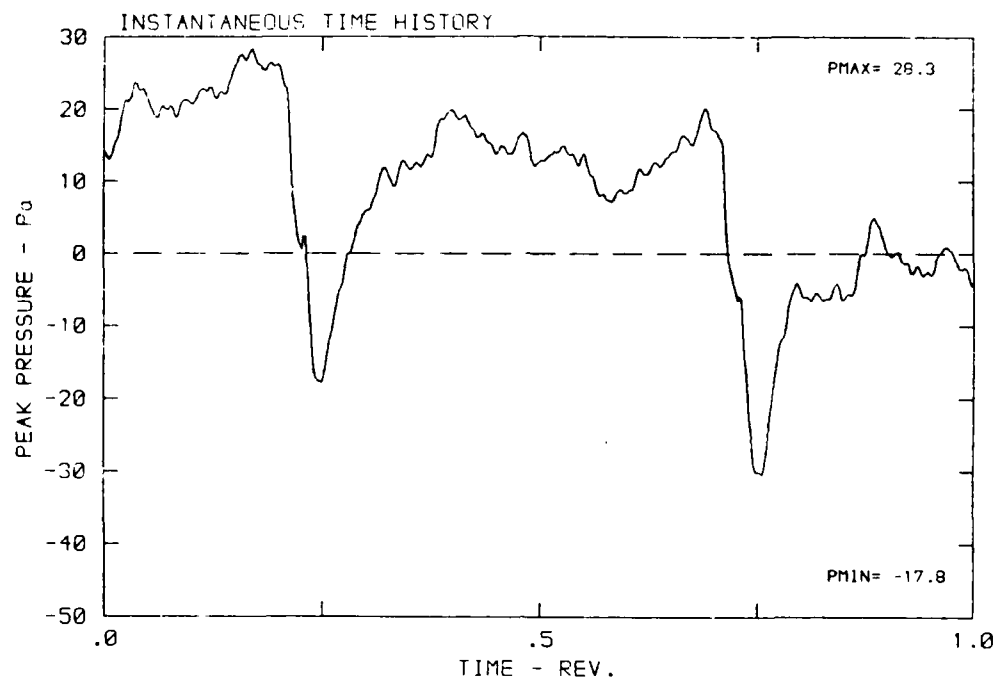
DATA POINT: LN-6 RUN: 159 MP: 2

β : 23.7° MH: .7771 n: 2400 rpm ν : .263 ϕ : -3.8° T: 287.2 K



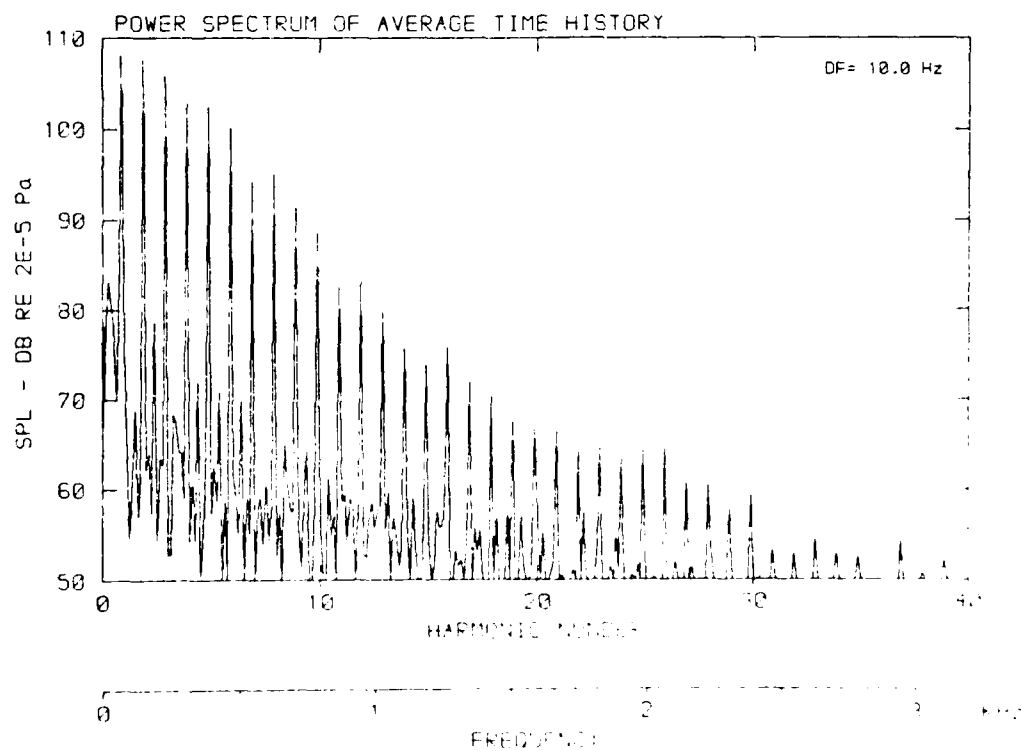
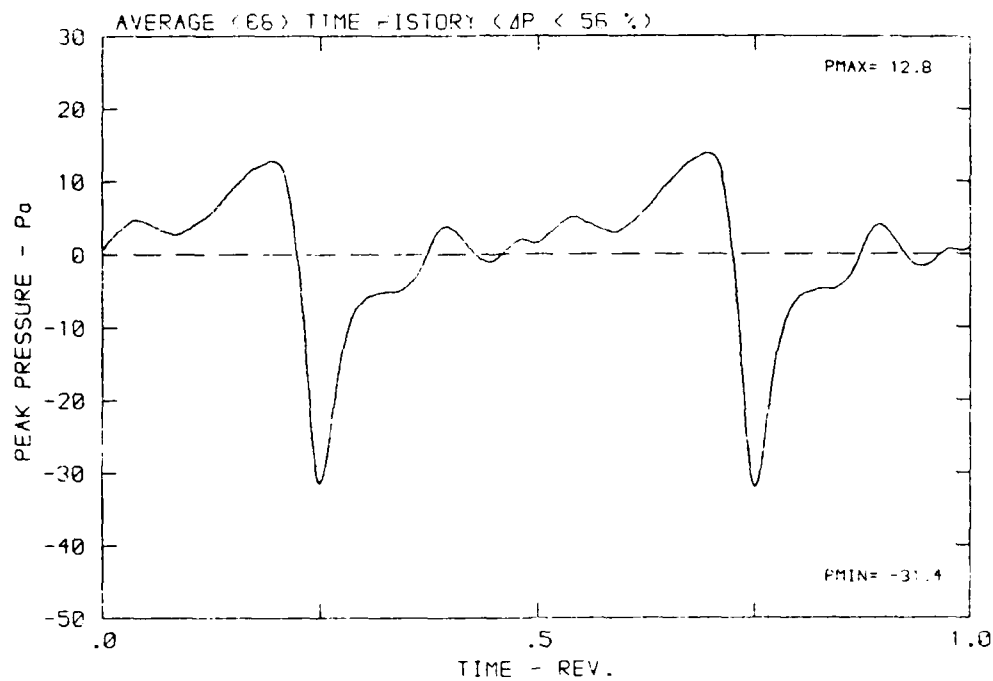
DATA POINT: LN-6 RUN: 153 MP: 3

β : 23.7° MH: .7771 n: 2400 rpm v/u : .263 ϕ : -3.6° τ : 287.2



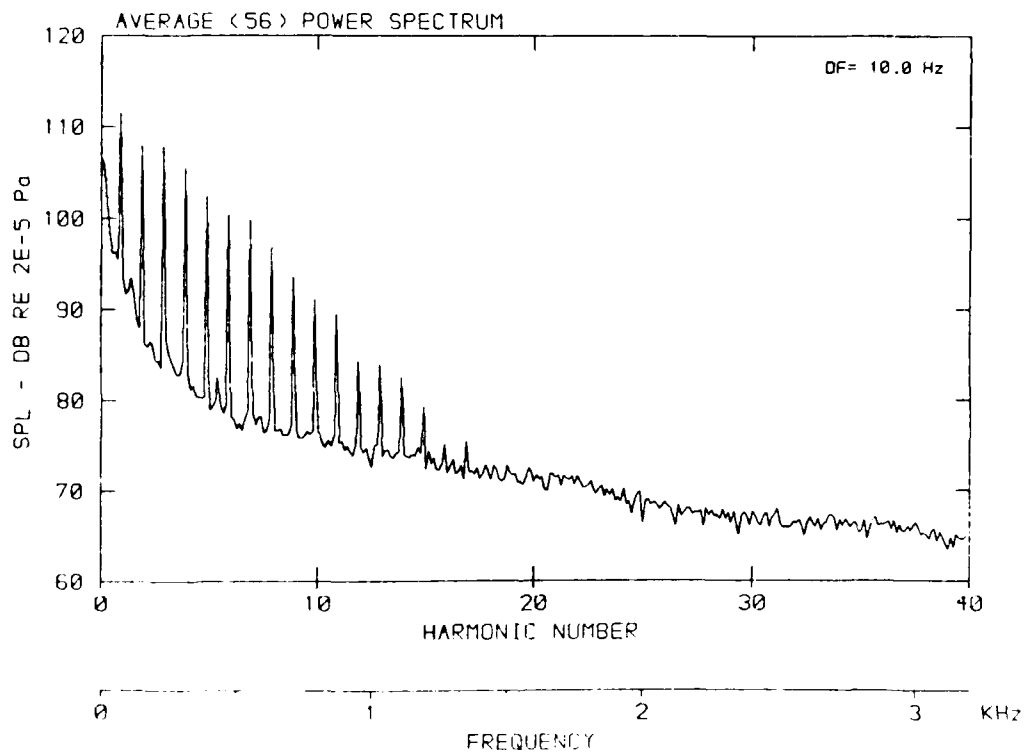
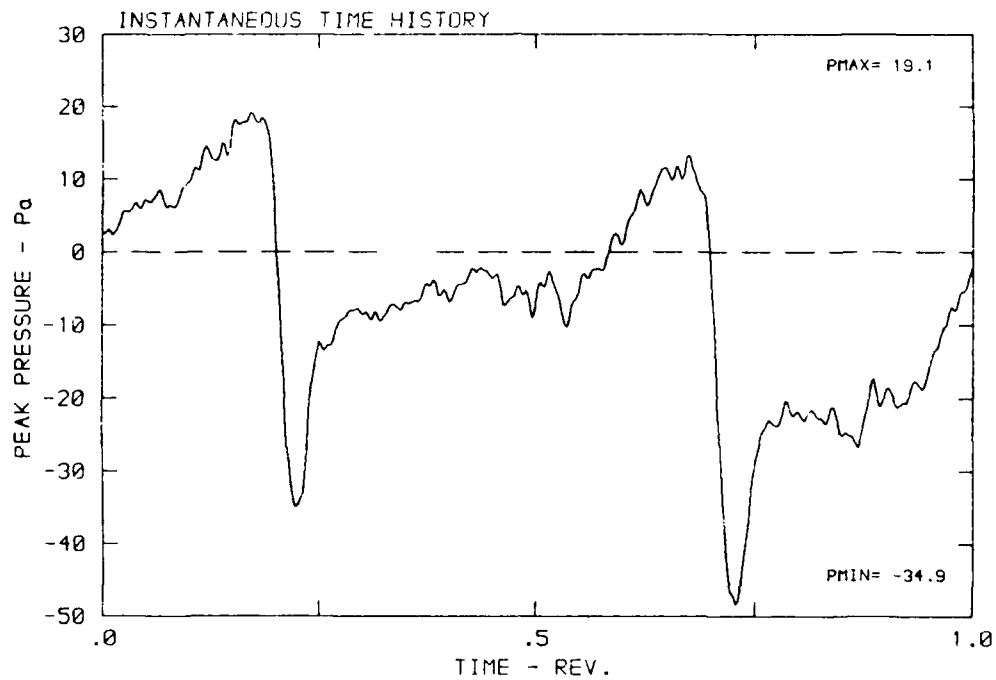
DATA POINT: LN-6 RUN: 159 MP: 3

β : 23.7° NH: .7771 n: 2400 rpm v/u : .263 ϕ : -3.8° T: 297.2 K



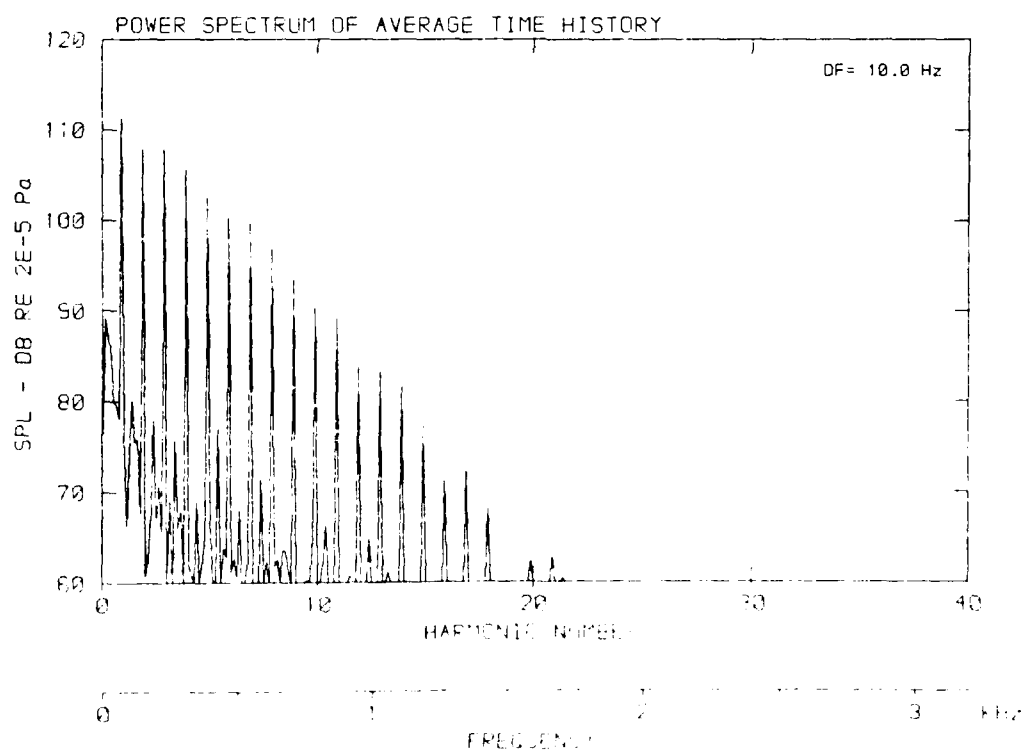
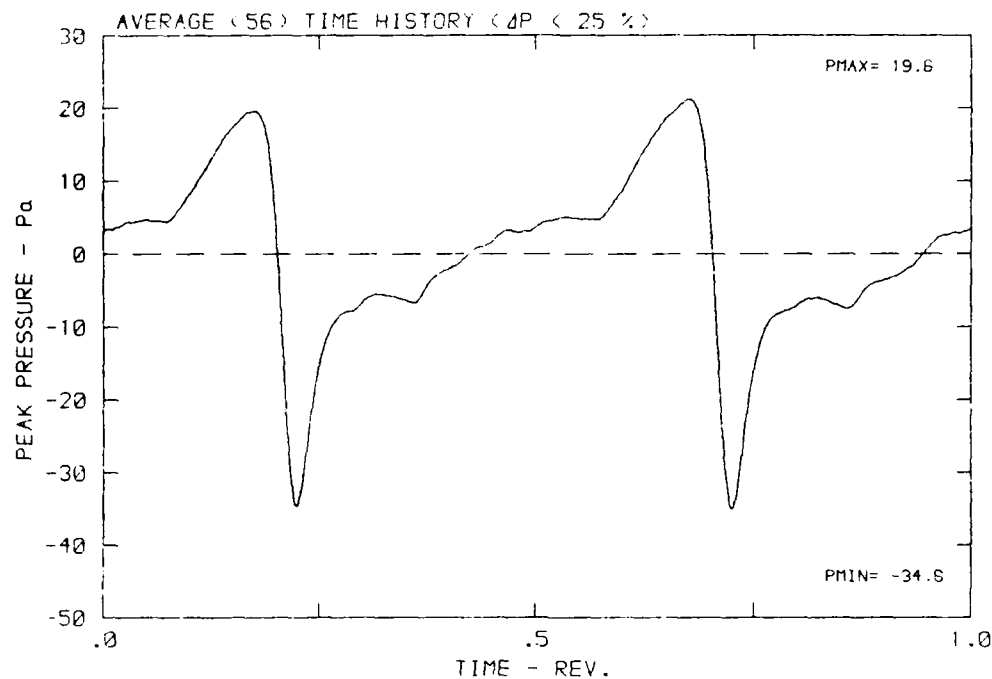
DATA POINT: LN-6 RUN: 153 MP: 4

β : 23.7° MH: .7771 n: 2400 rpm v/u : .263 ϕ : -3.8° T: 287.2 K



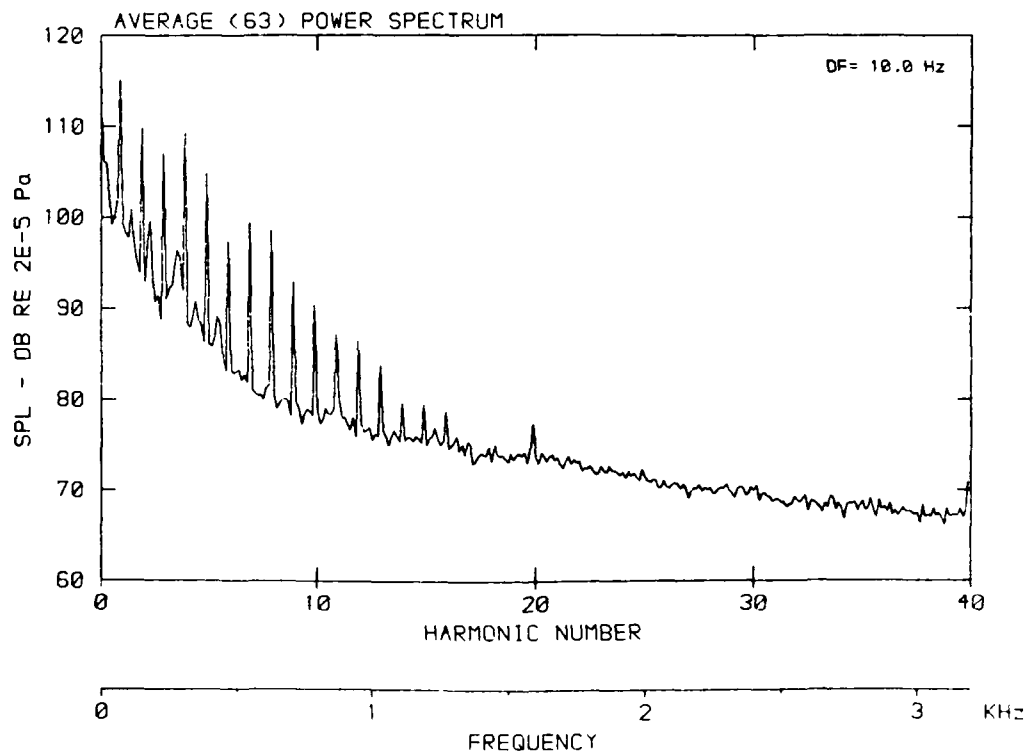
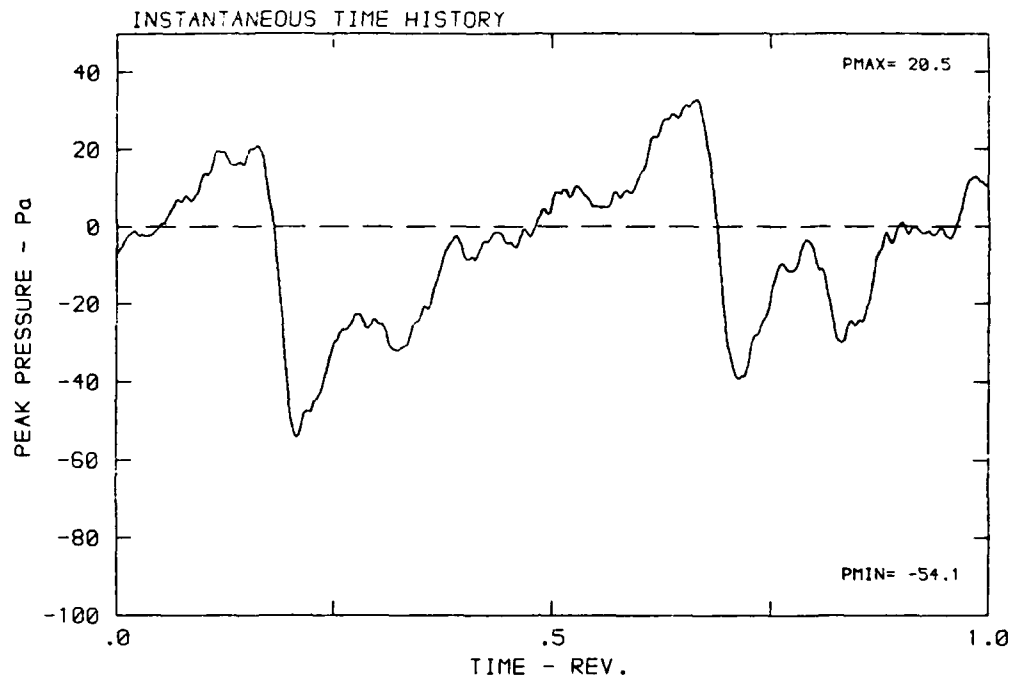
DATA POINT: LN-6 RUN: 159 MP: 4

β : 23.7° MH: .7771 n: 2400 rpm v/u: .26 ϕ : -3.8° T: 287.2 K



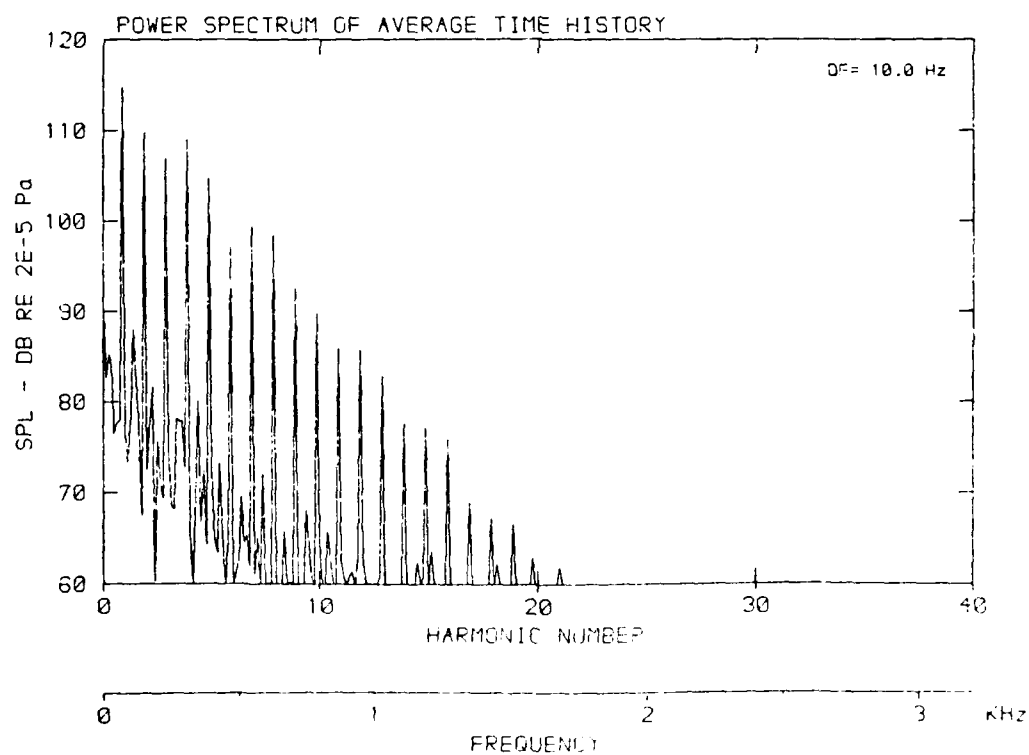
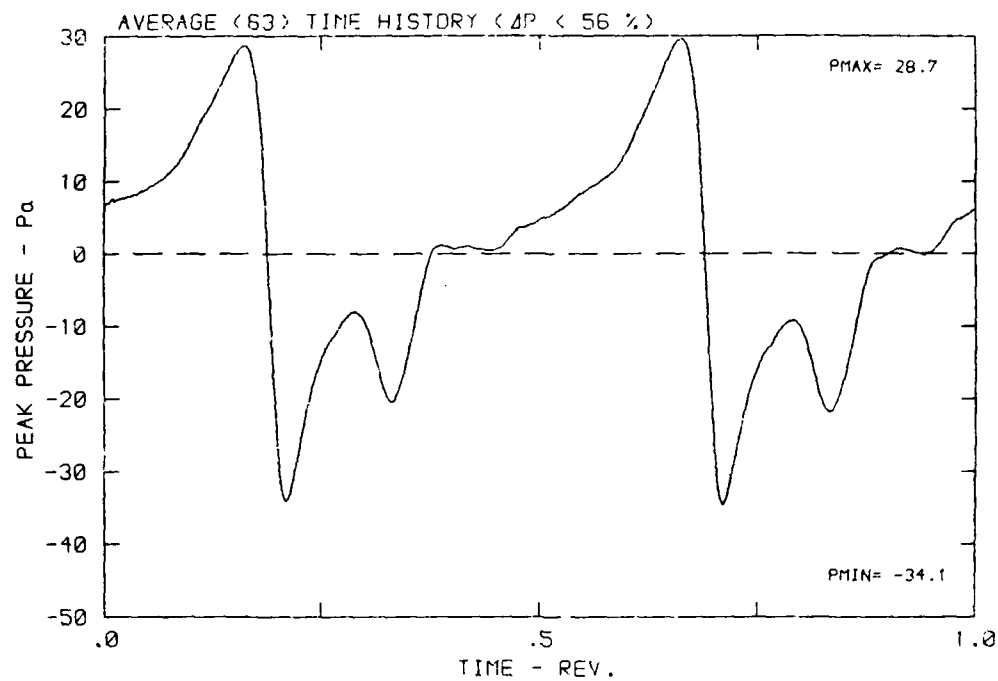
DATA POINT: LN-6 RUN: 159 MP: 5

β : 23.7° MH: .7771 n: 2400 rpm v/u : .263 ϕ : -3.8° T: 287.2 K



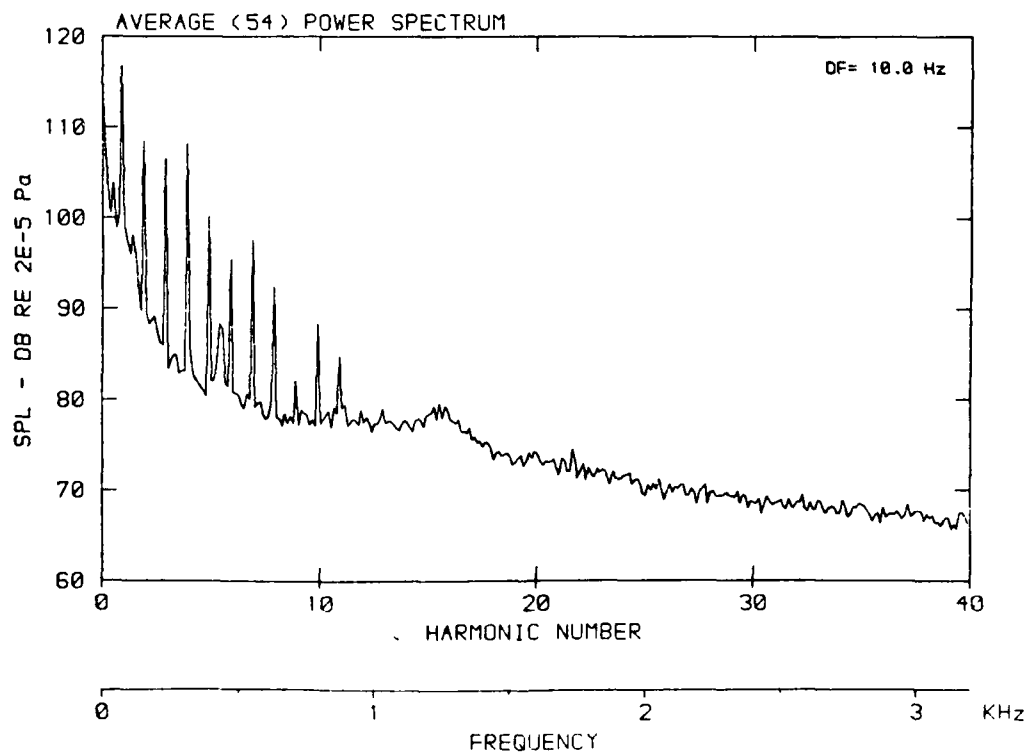
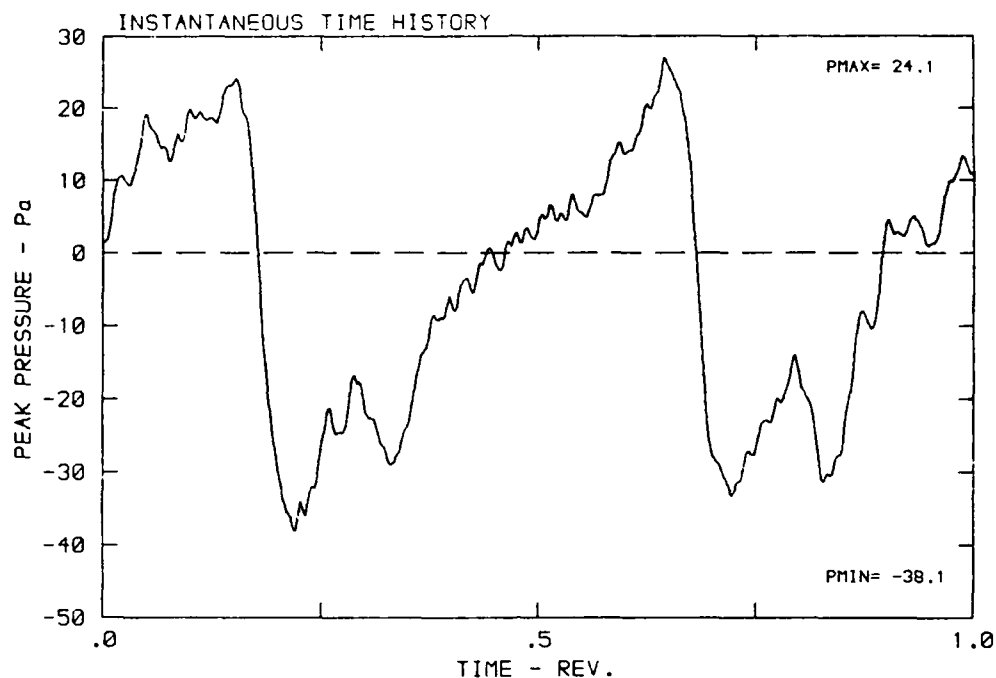
DATA POINT: LN-6 RUN: 159 MP: 5

β : 23.7° MH: .7771 n: 2400 rpm v/u: .263 ϕ : -3.8° T: 287.2 K



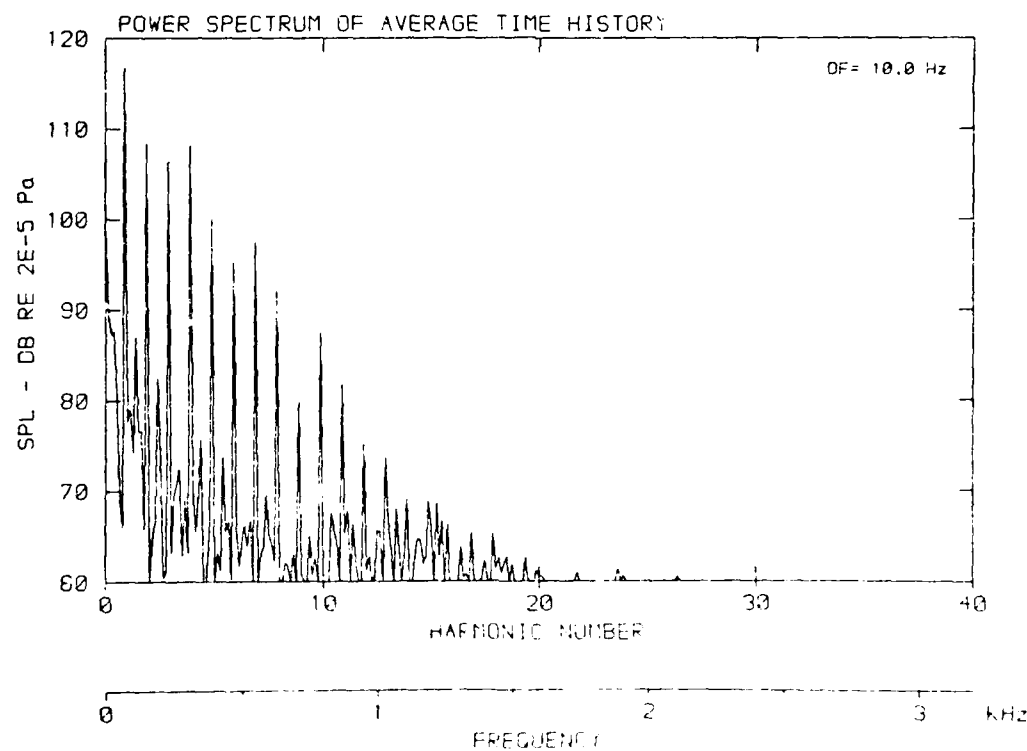
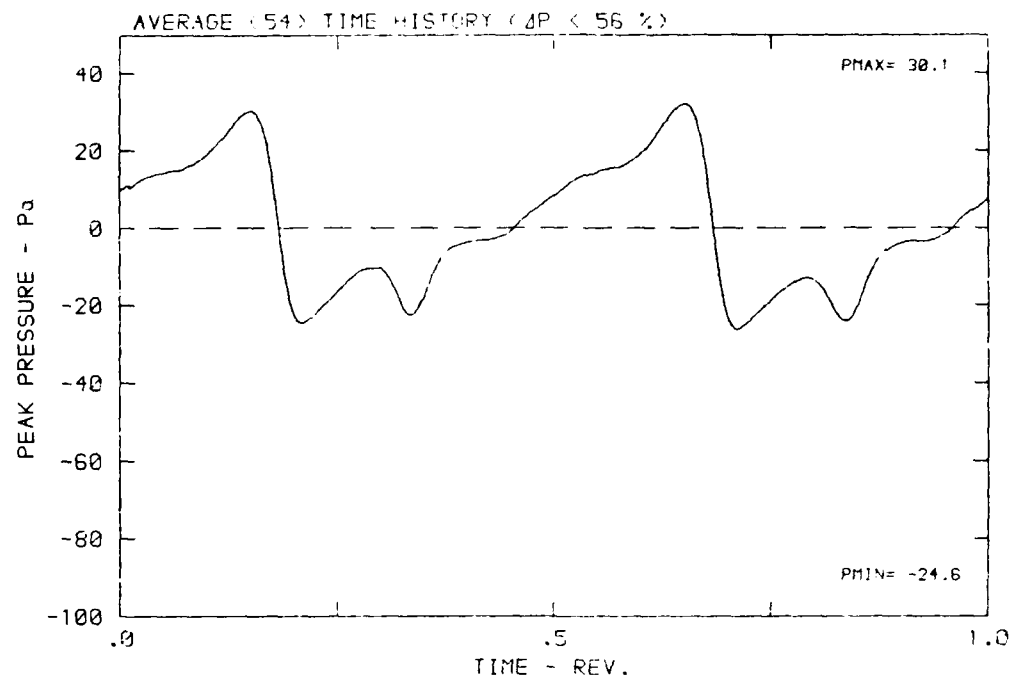
DATA POINT: LN-6 RUN: 159 MP: 6

β : 23.7° MH: .7771 n: 2400 rpm v/u : .263 ψ : -3.8° T: 287.2 K



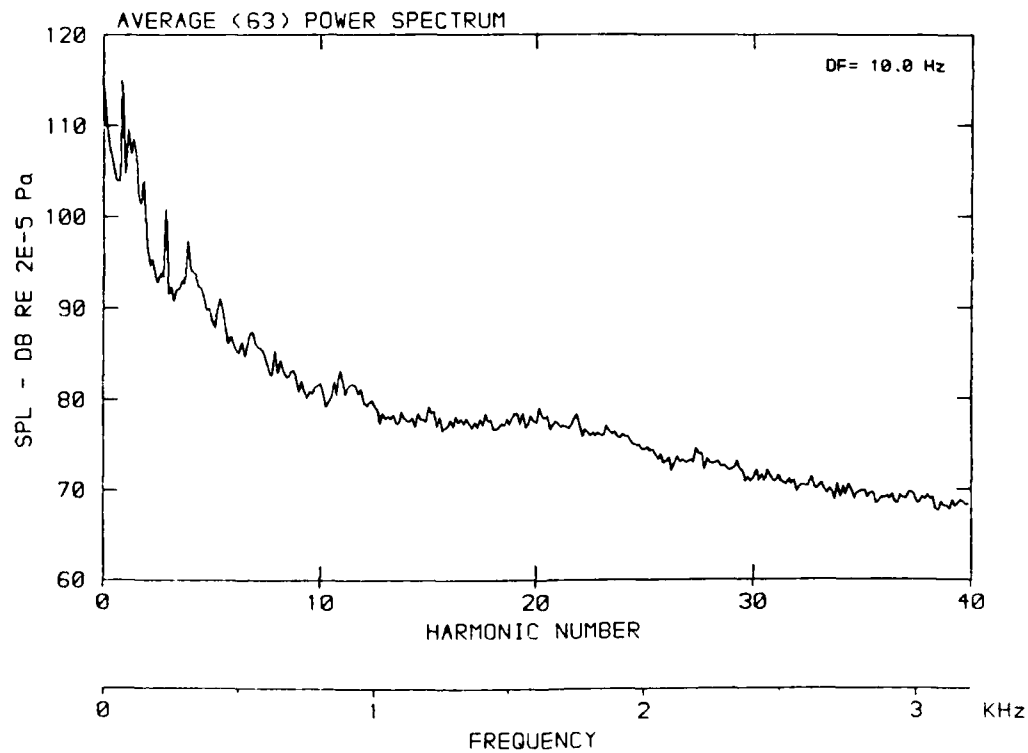
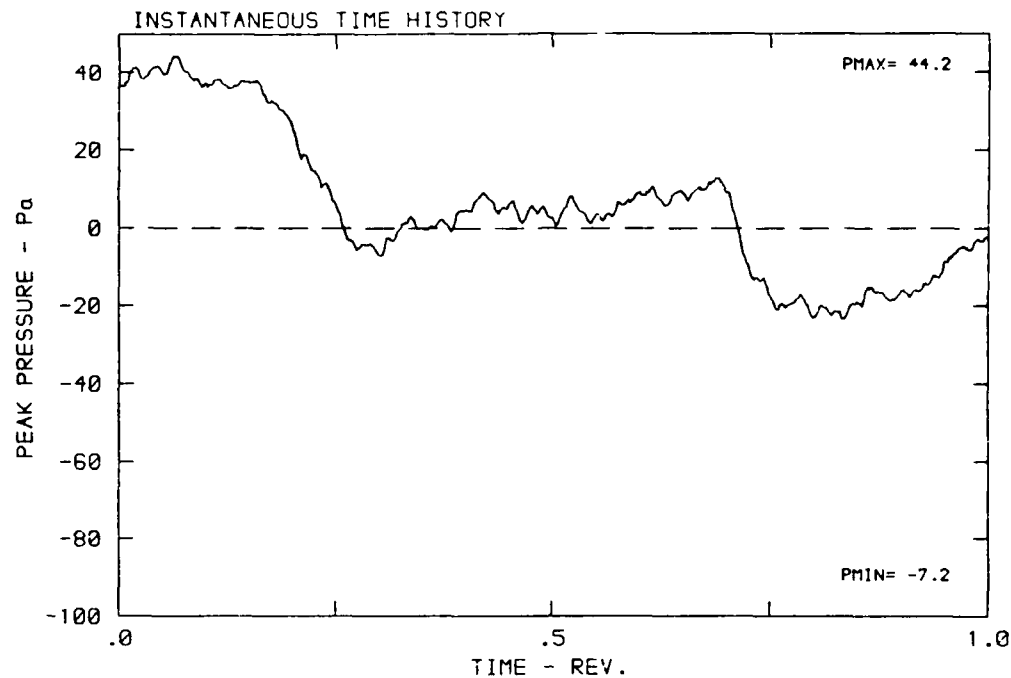
DATA POINT: LN-6 RUN: 159 MP: 6

β : 23.7° MH: .7771 n: 2400 rpm v/u : .263 ϕ : -3.8° T: 287.2 K



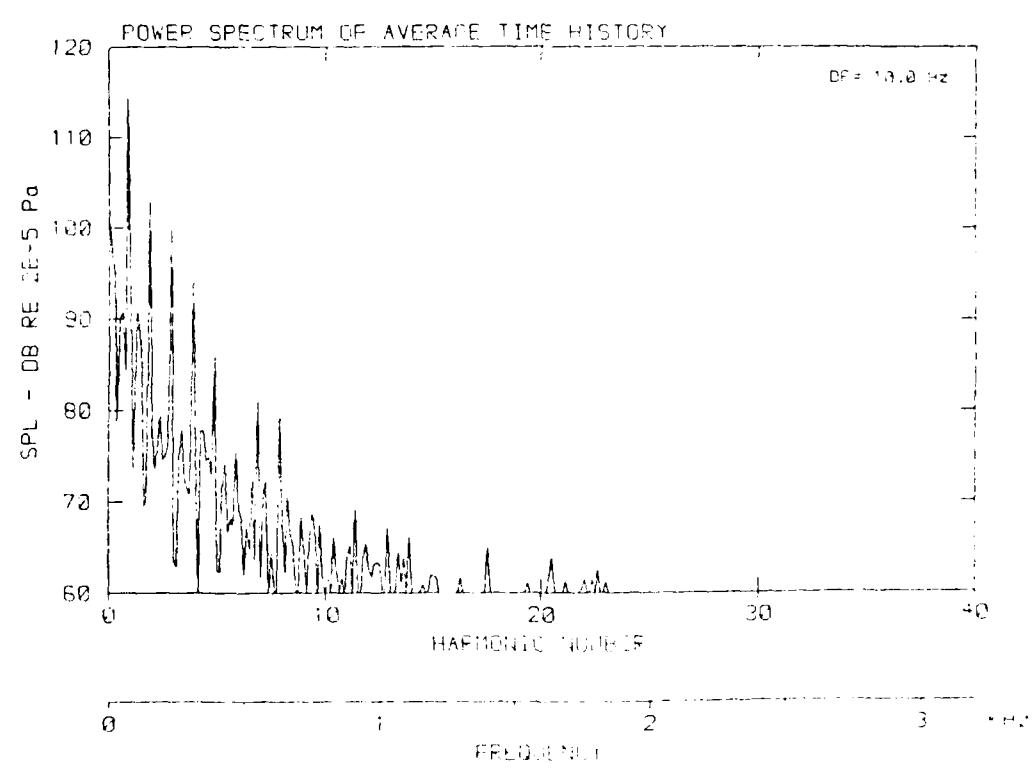
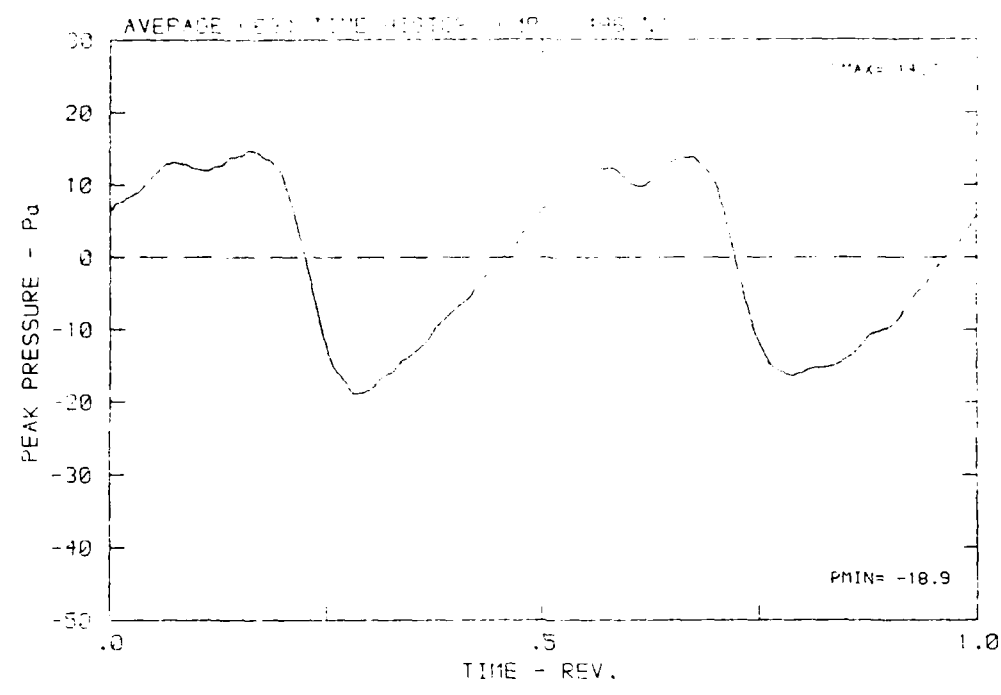
DATA POINT: LN-6 RUN: 159 MP: 7

β : 23.7° MH: .7771 n: 2400 rpm v/u : .263 ϕ : -3.8° T: 287.2 K



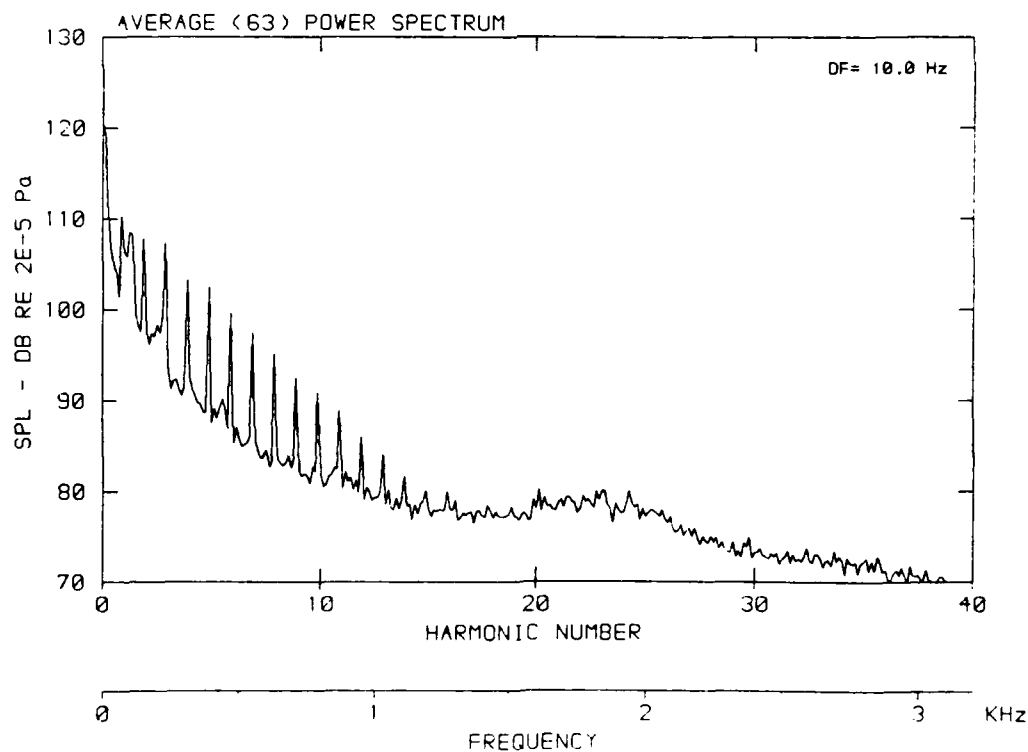
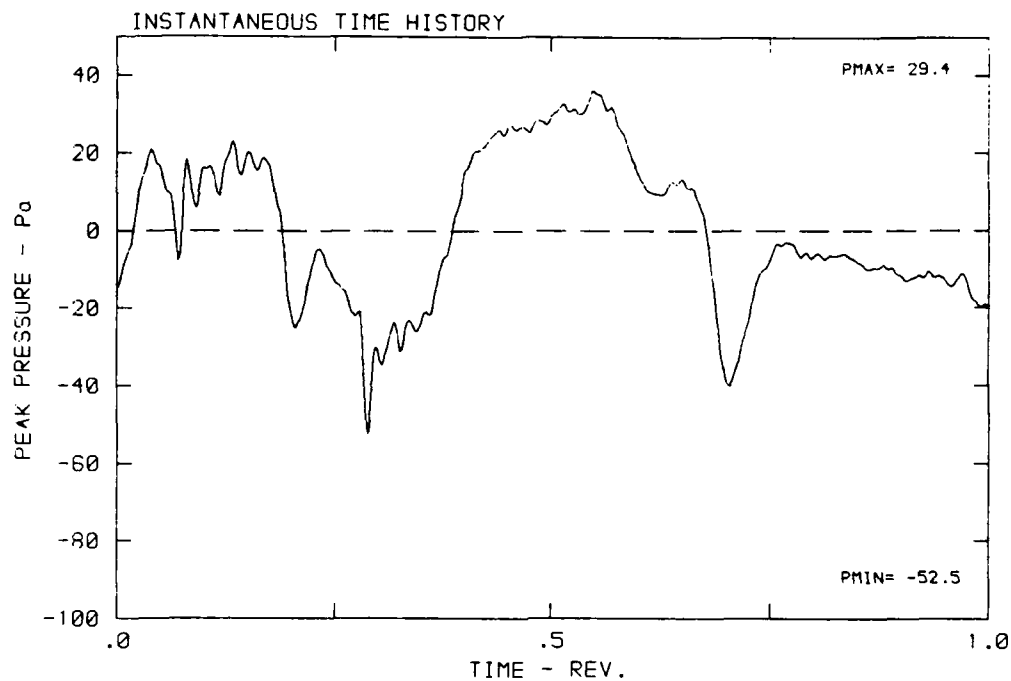
DATA POINT: LN-5 5.7375 15

B: 23.70 MH: .0771 N: 1000 PM: .014 .200 PL: 10.00 : 1.00



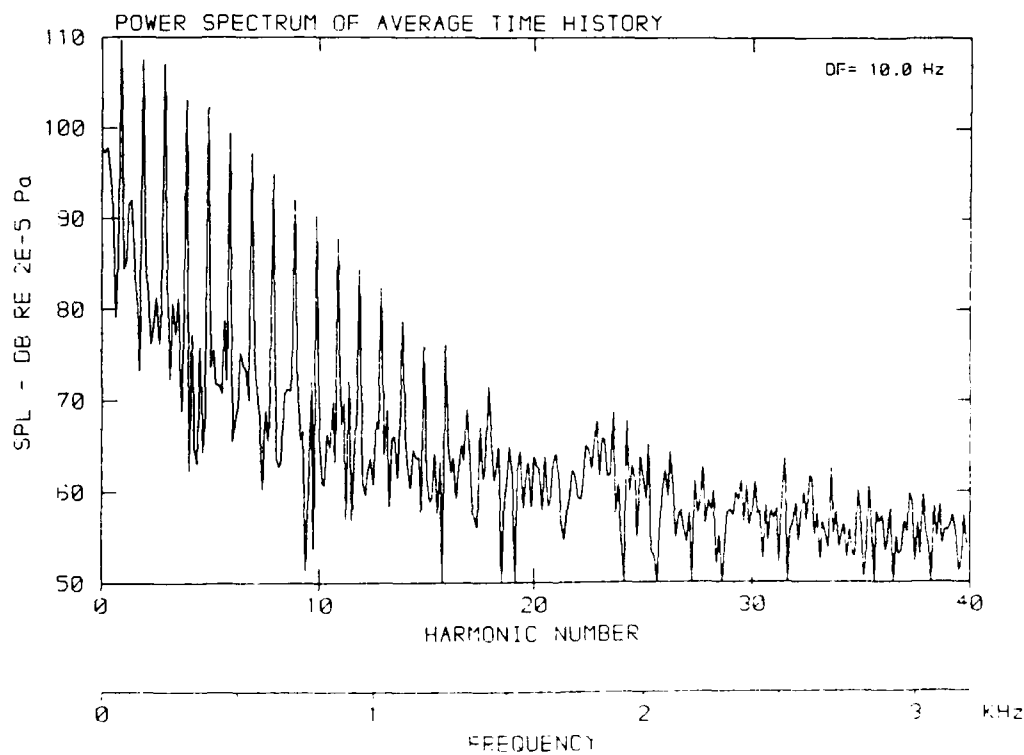
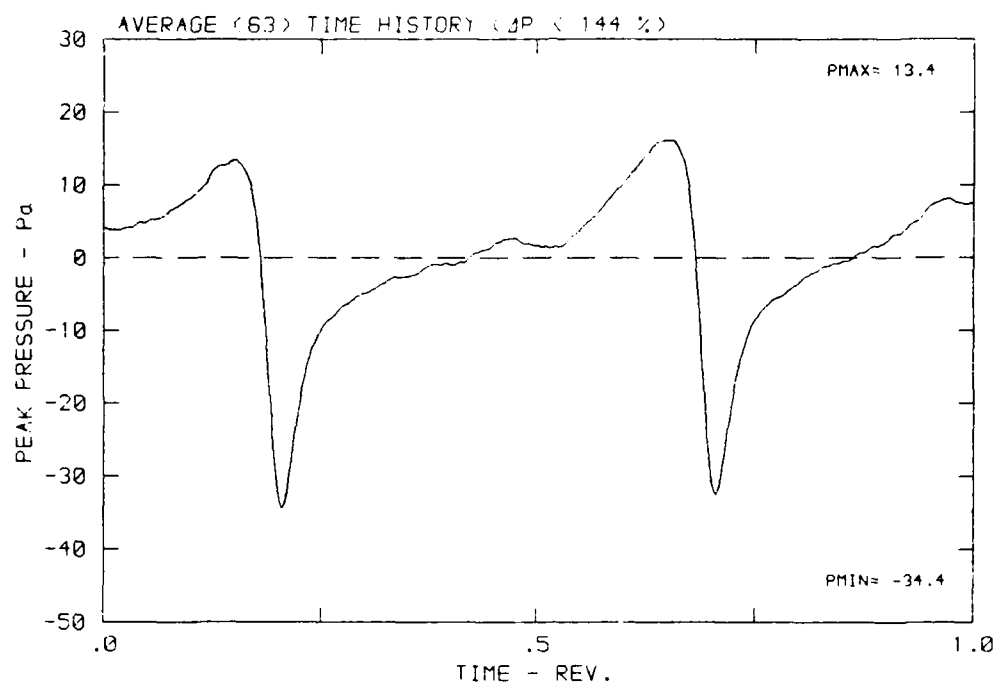
DATA POINT: LN-6 RUN: 159 MP: 8

β : 23.7° MH: .7771 n: 2400 rpm v/u: .263 ϕ : -3.8° T: 287.2 K



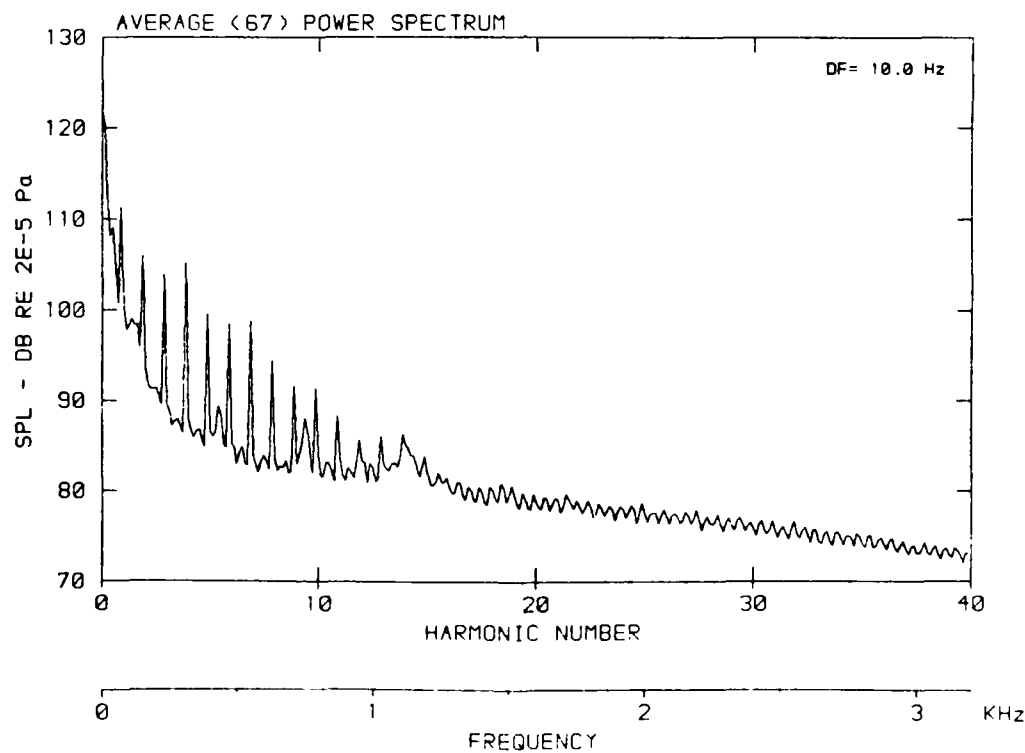
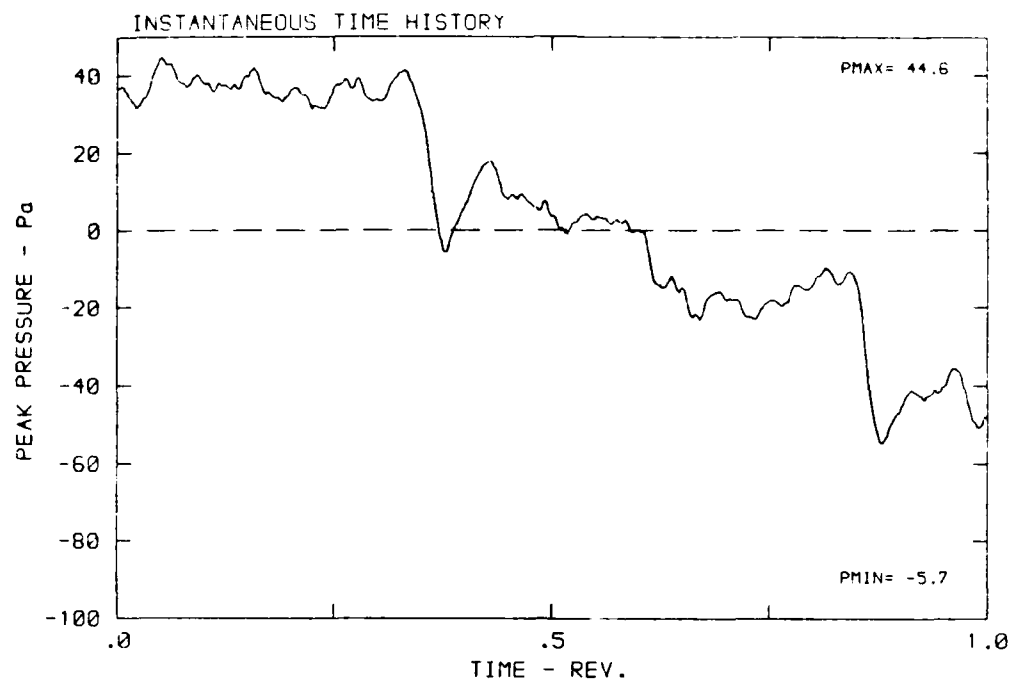
DATA POINT: LN-6 RUN: 159 MP: 8

β : 23.7° MH: .7771 n: 2400 rpm v/u : .263 ϕ : -3.8° T: 287.2 K



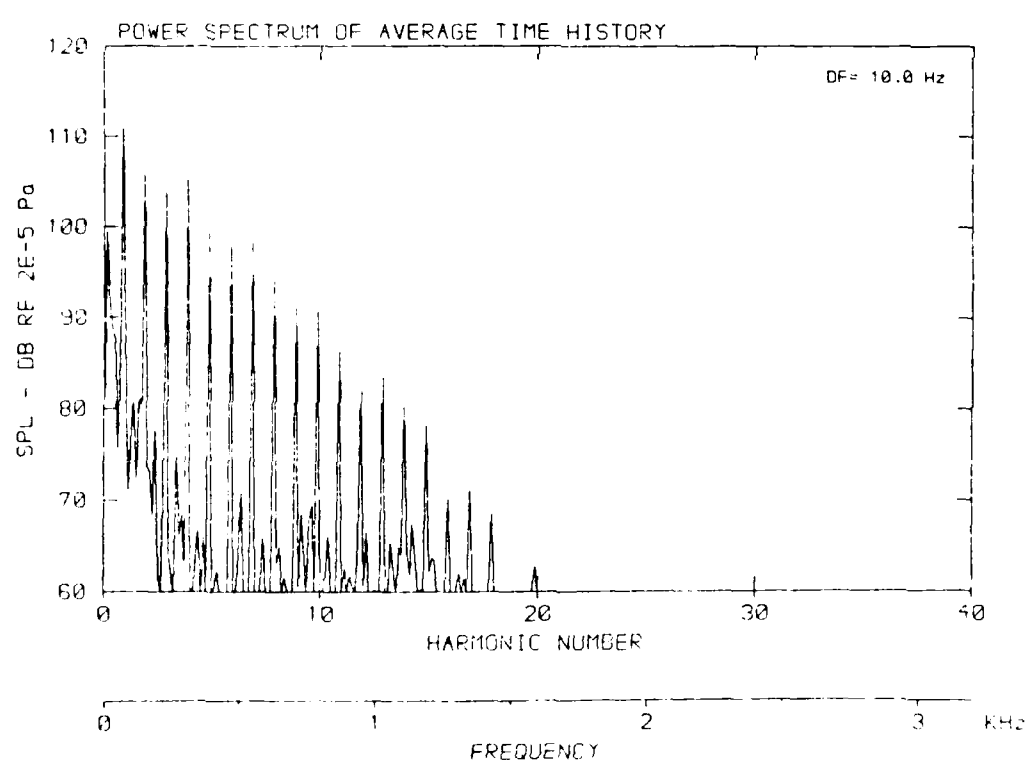
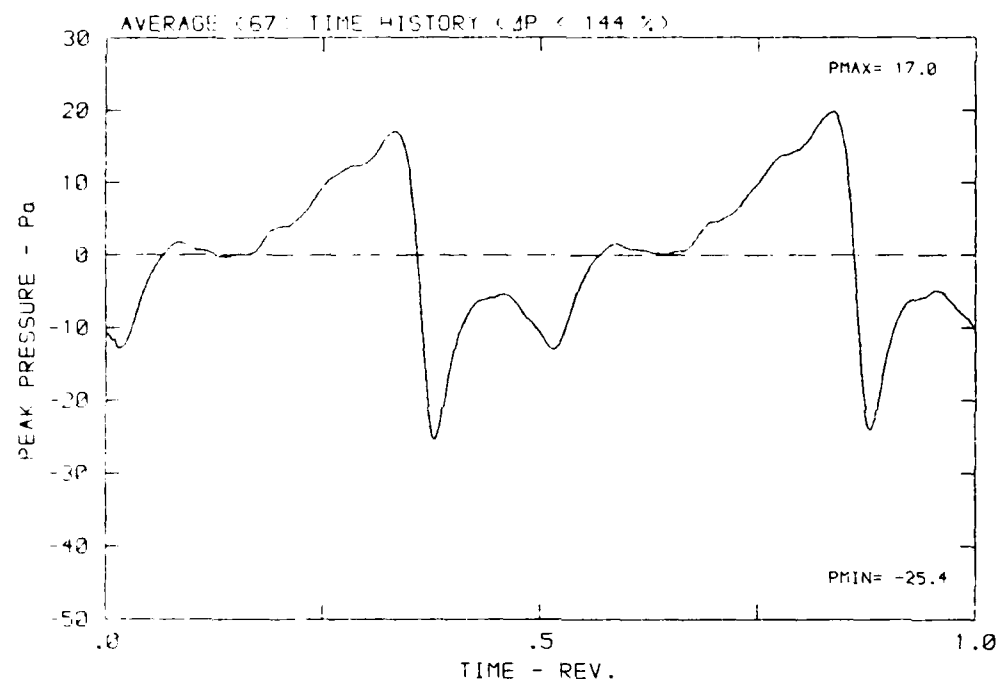
DATA POINT: LN-6 RUN: 159 MP: 6

β : 23.7° MH: .7771 n: 2400 rpm vru: .253 ϕ : -3.5° T: 257.2



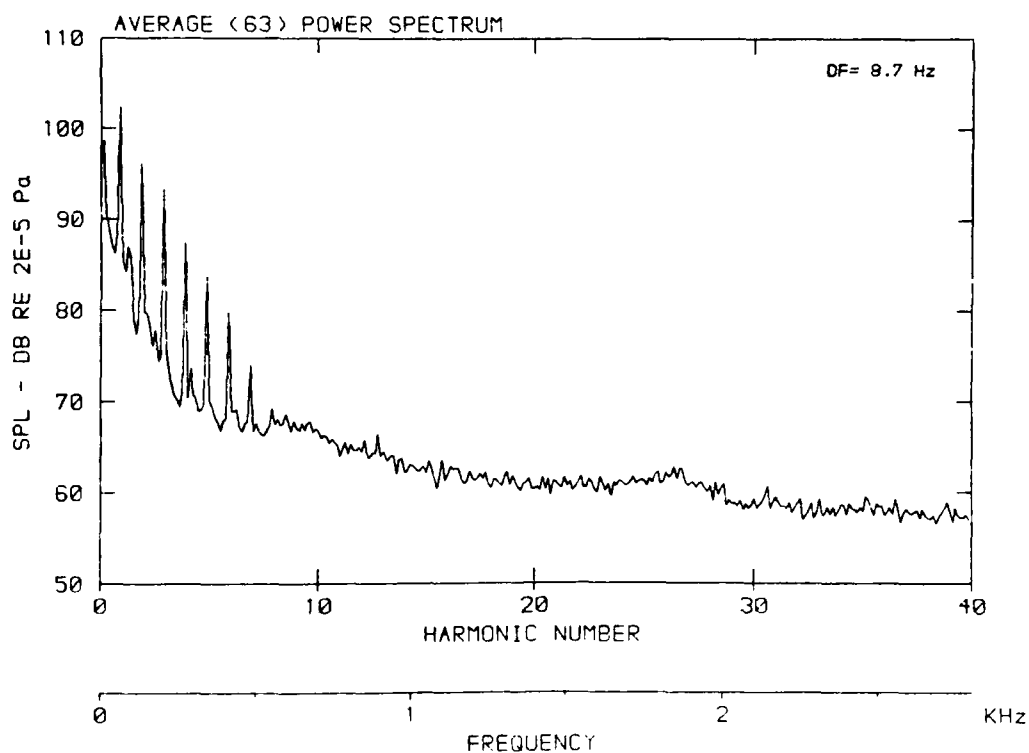
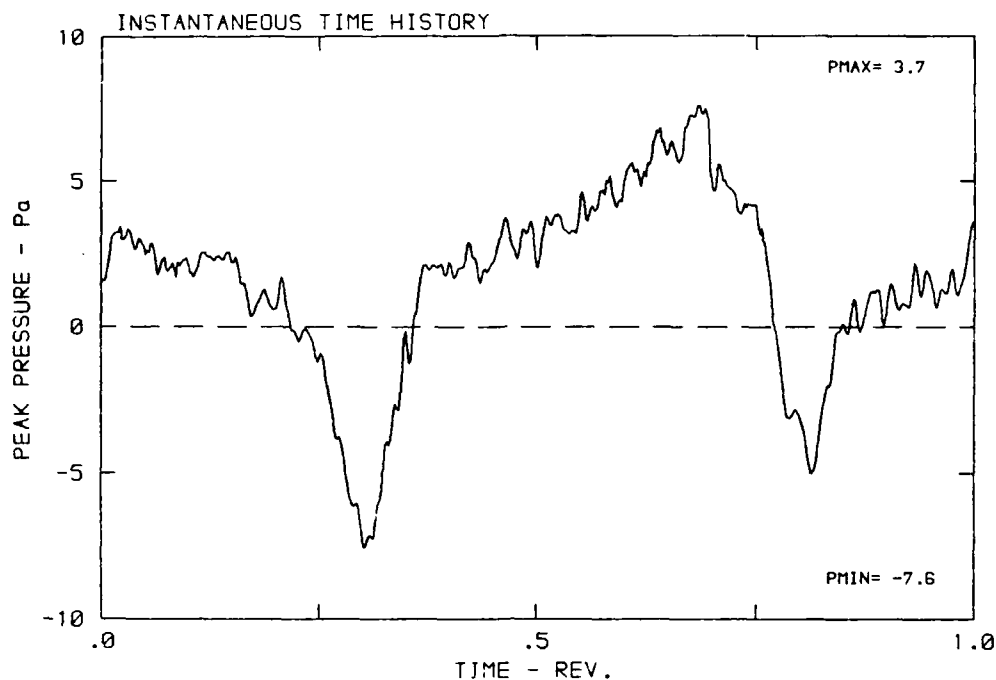
DATA POINT: LN-6 RUN: 159 MP: 9

β : 23.7° MH: .7771 n: 2400 rpm v/u : .263 ϕ : -3.8° T: 287.2 K



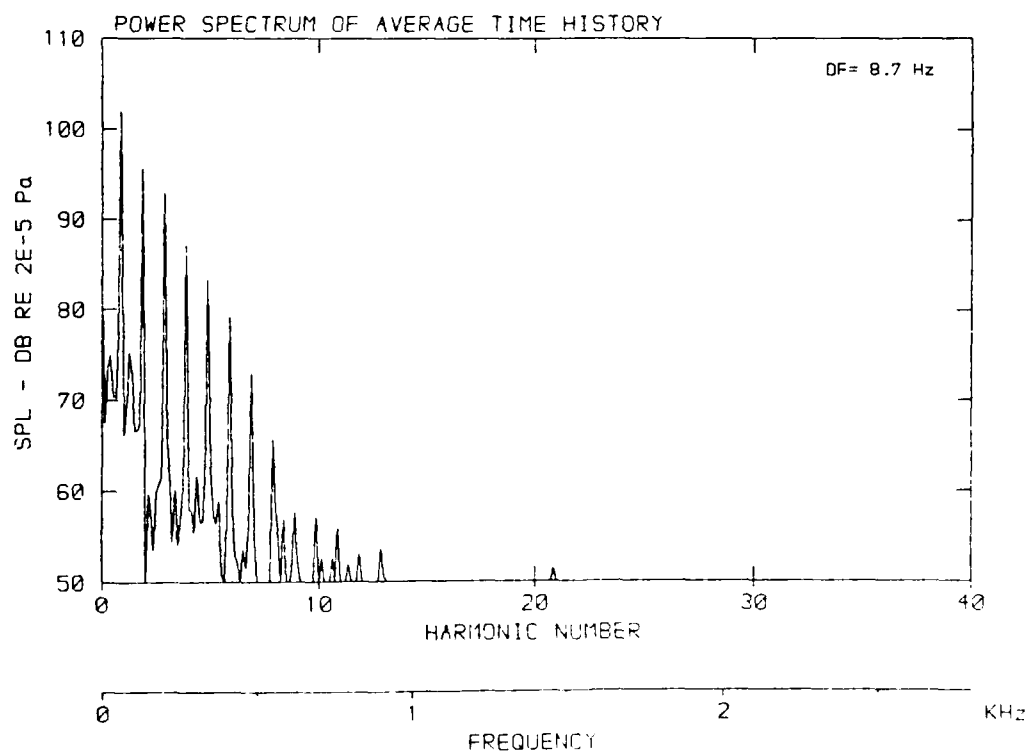
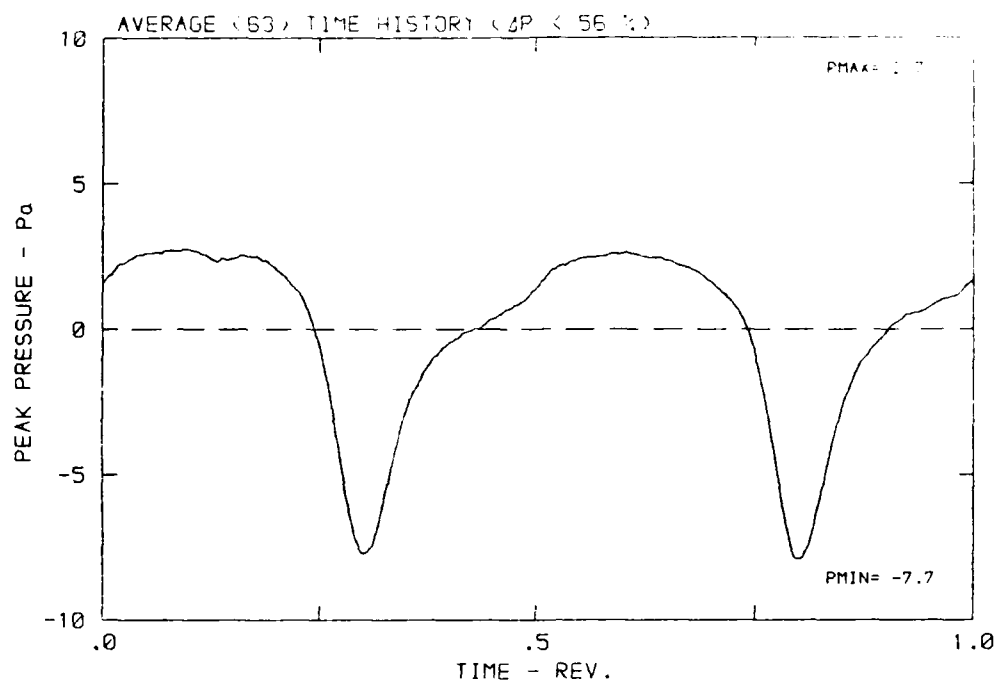
DATA POINT: FN-1 RUN: 166 MP: 1

β : 19.9° MH: .6745 n: 2100 rpm v/u : .231 ϕ : 3.6° T: 287.5 K



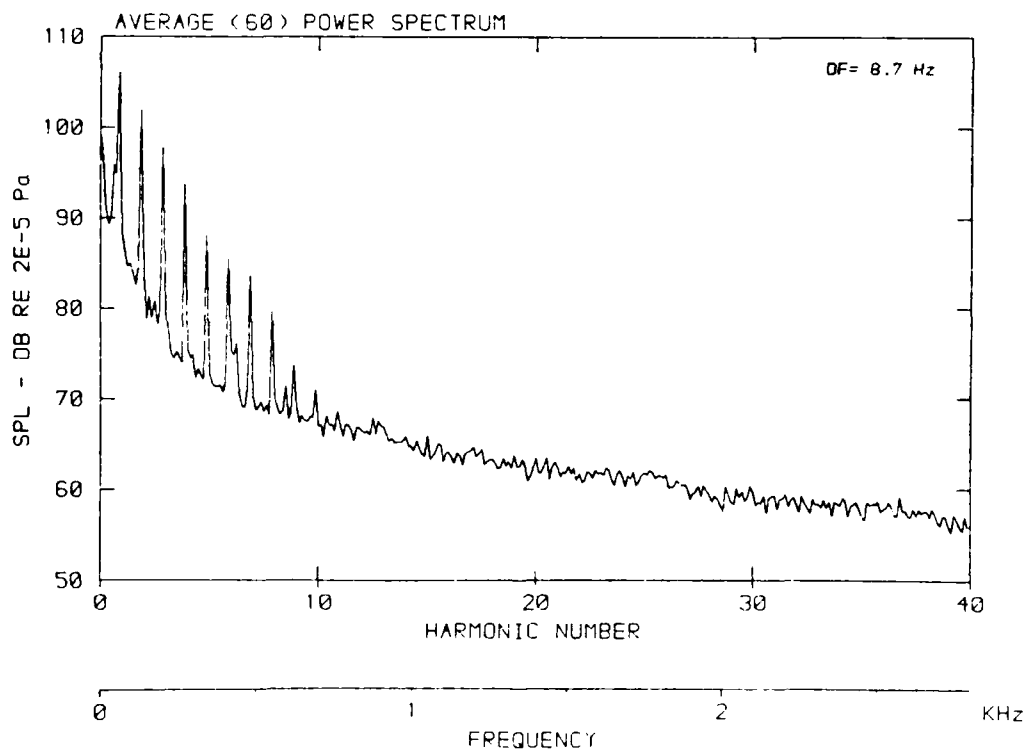
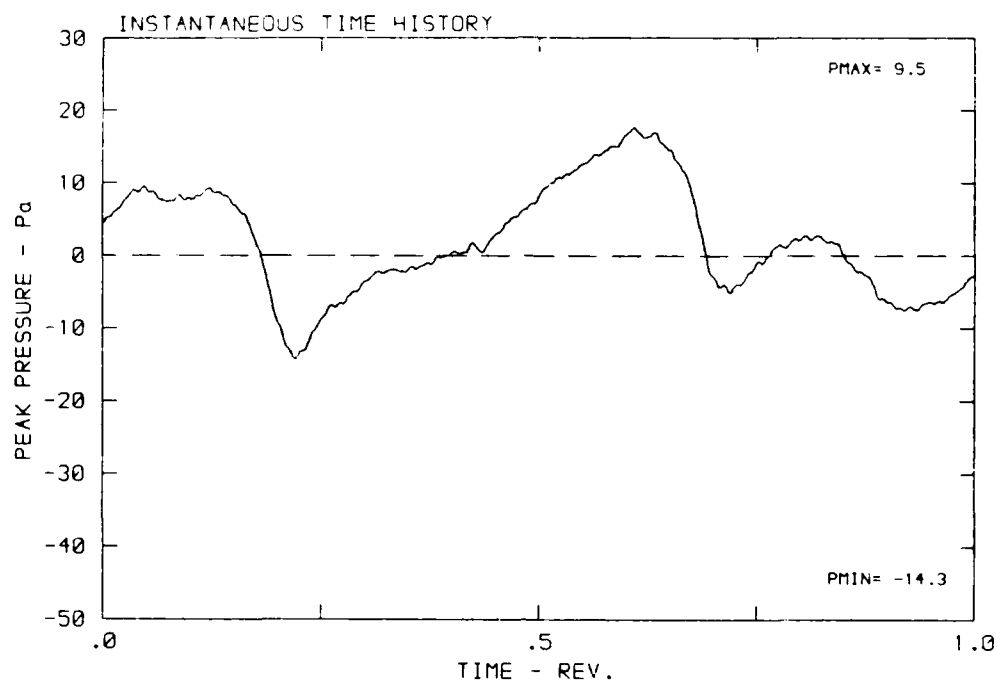
DATA POINT: FN-1 RUN: 166 MP: 1

β : 19.9° MH: .6745 n: 2100 rpm vru: .231 ϕ : 3.6° T: 28.5



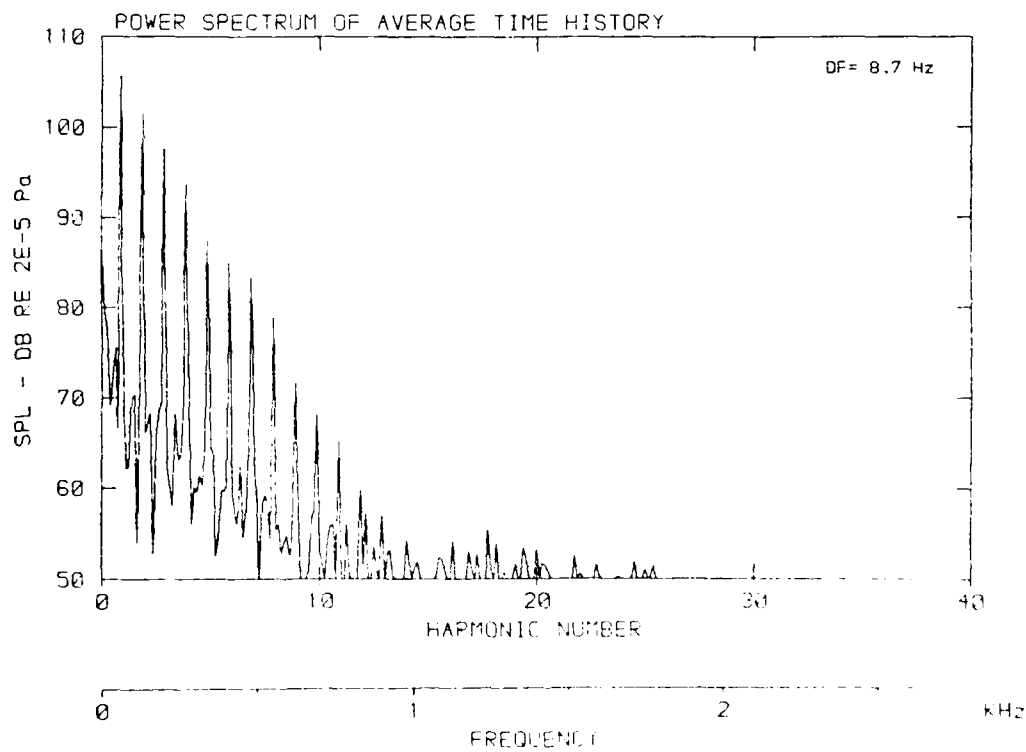
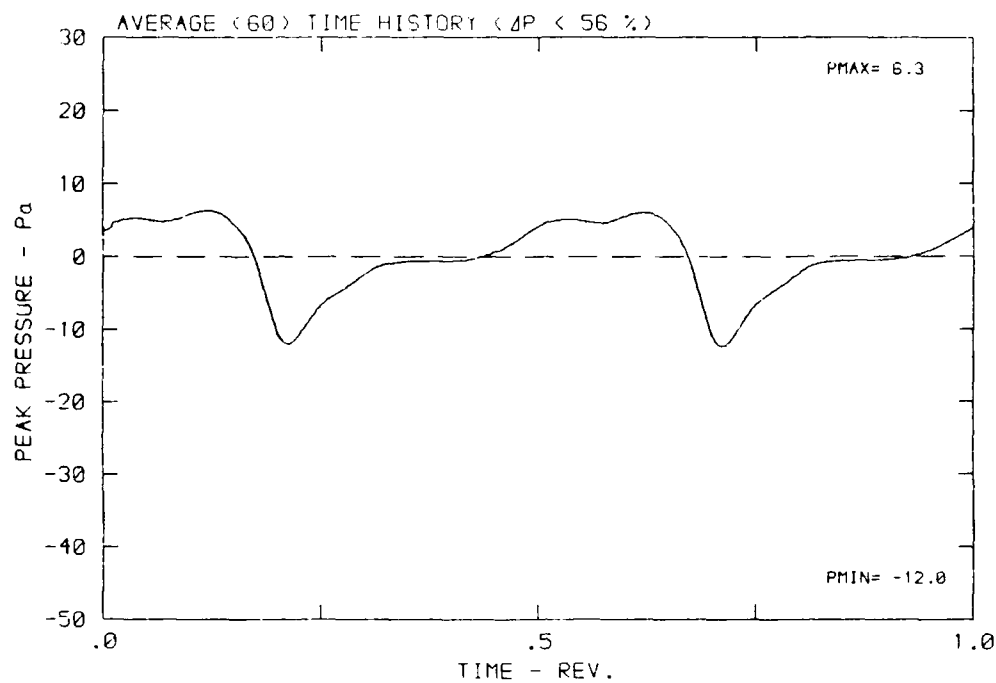
DATA POINT: FN-1 RUN: 166 MF: 2

β : 19.9° MH: .6745 n: 2100 rpm γ : .231 ϕ : 3.6° T: 287.5 K



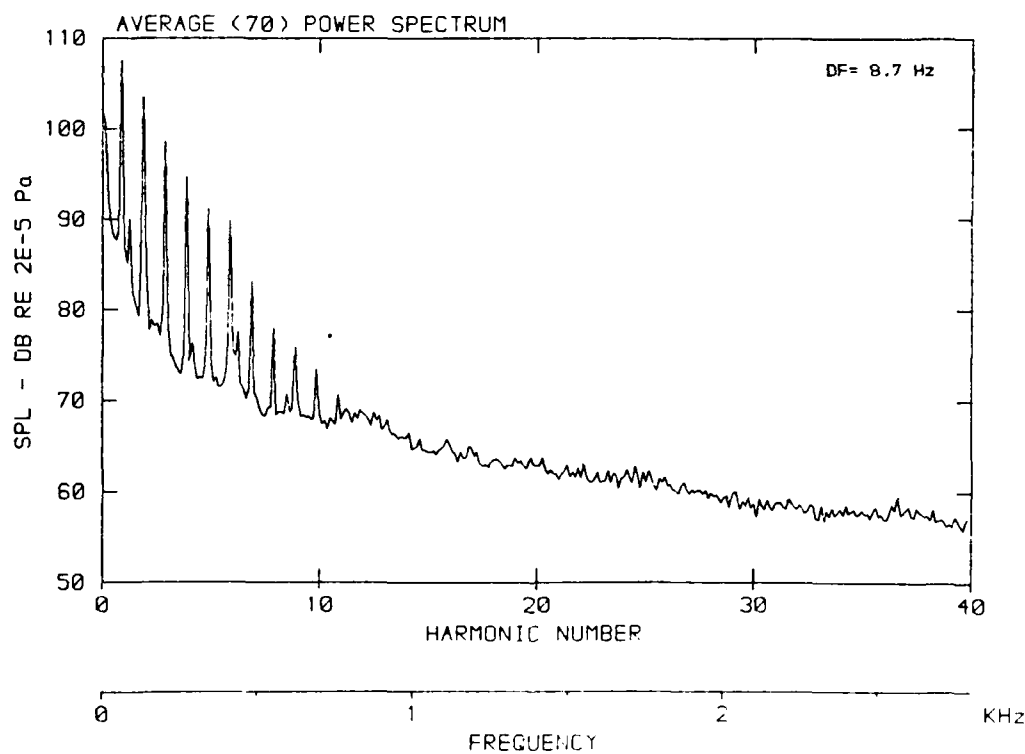
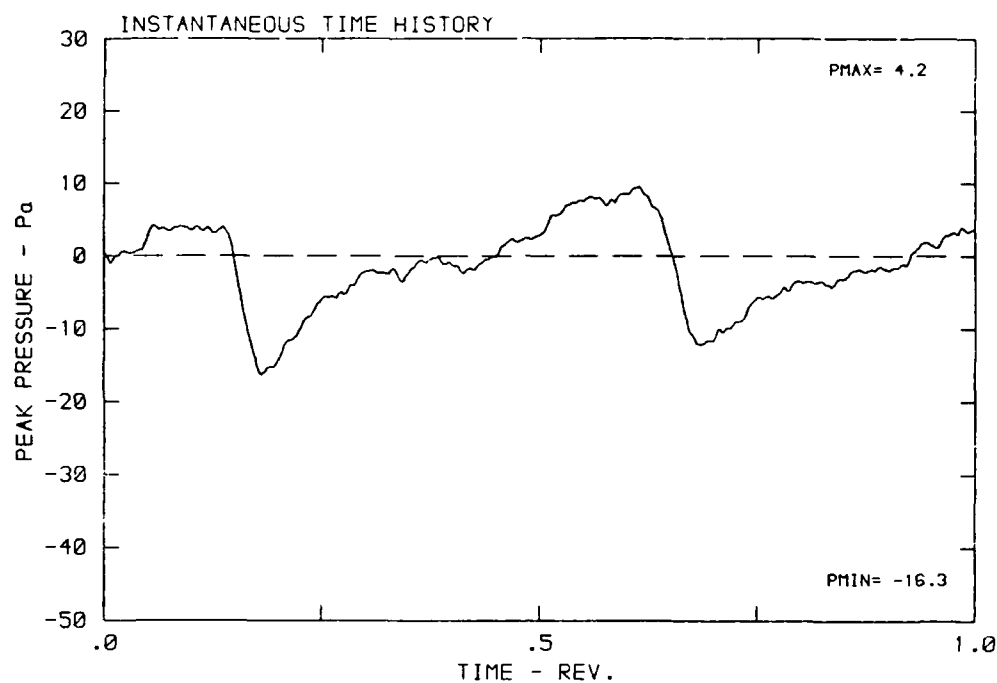
DATA POINT: FN-1 RUN: 166 MP: 2

β : 19.9° MH: .6745 n: 2100 rpm v/u : .231 ϕ : 3.6° T: 287.5 K



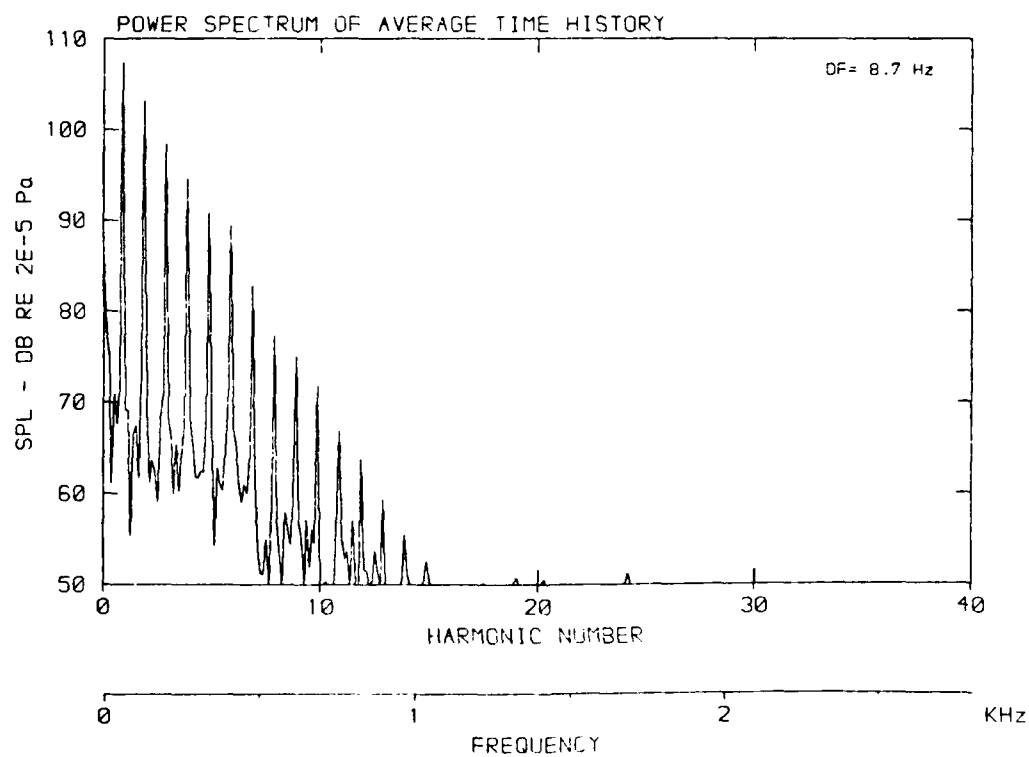
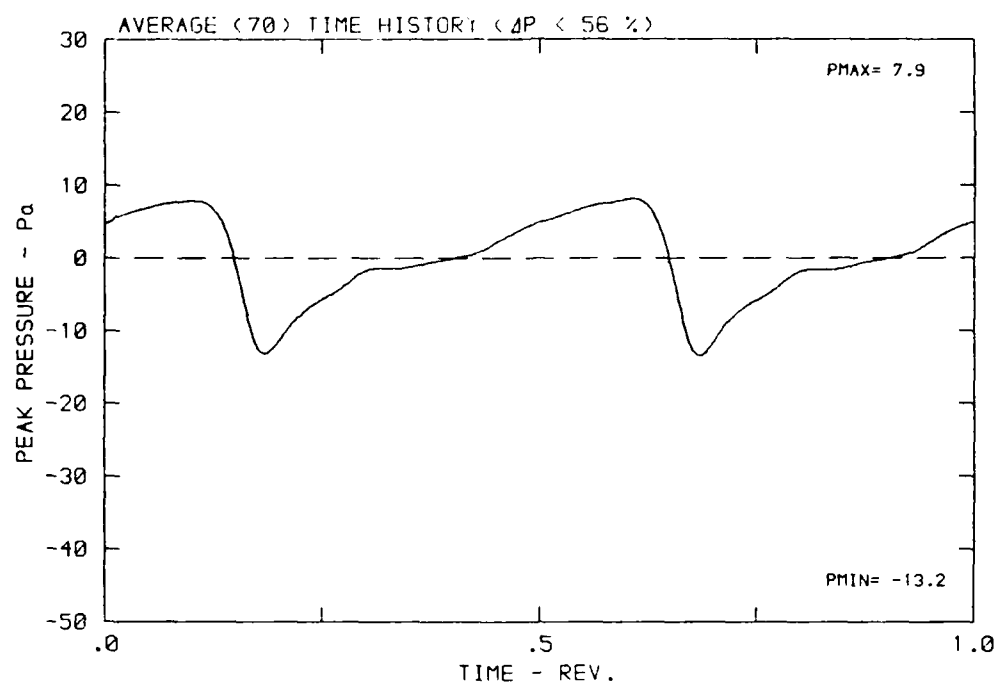
DATA POINT: FN-1 RUN: 166 MP: 3

β : 19.9° MH: .6745 n: 2100 rpm v/u : .231 ϕ : 3.6° T: 287.5 K



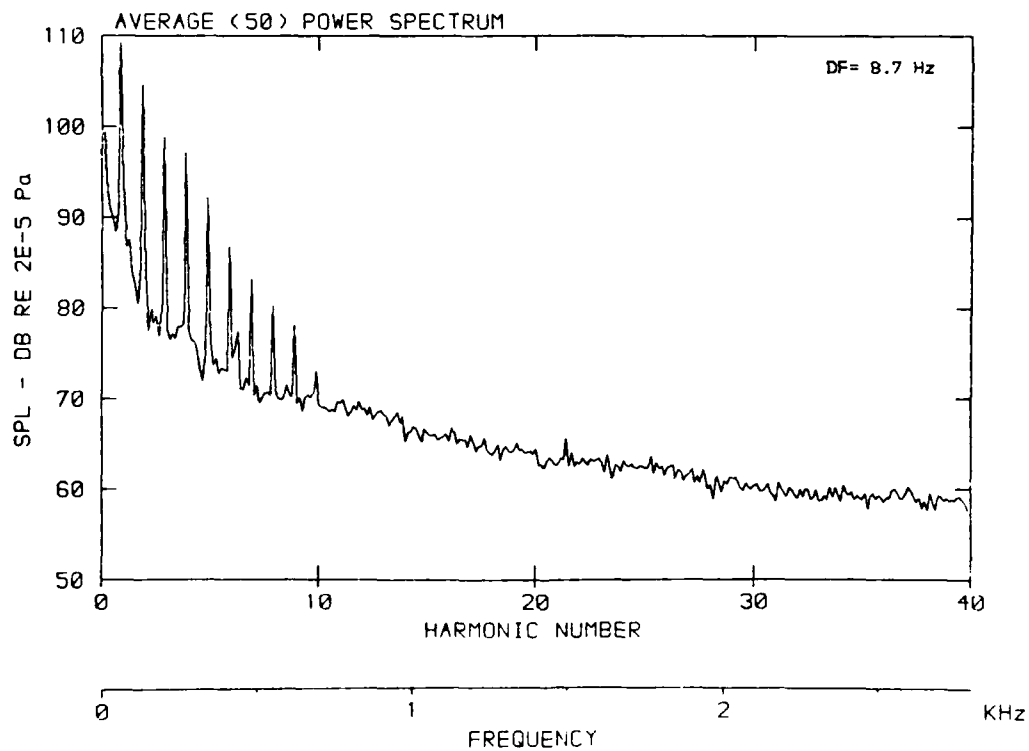
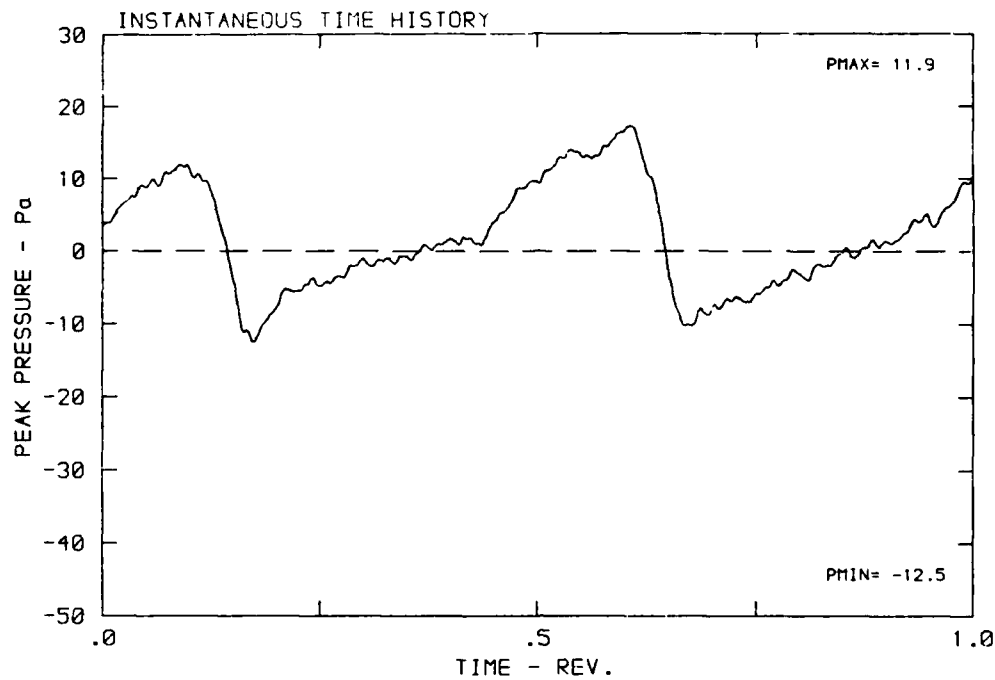
DATA POINT: FN-1 RUN: 166 MP: 3

β : 19.9° MH: .6745 n: 2100 rpm v/u : .231 ϕ : 3.6° T: 287.5 K



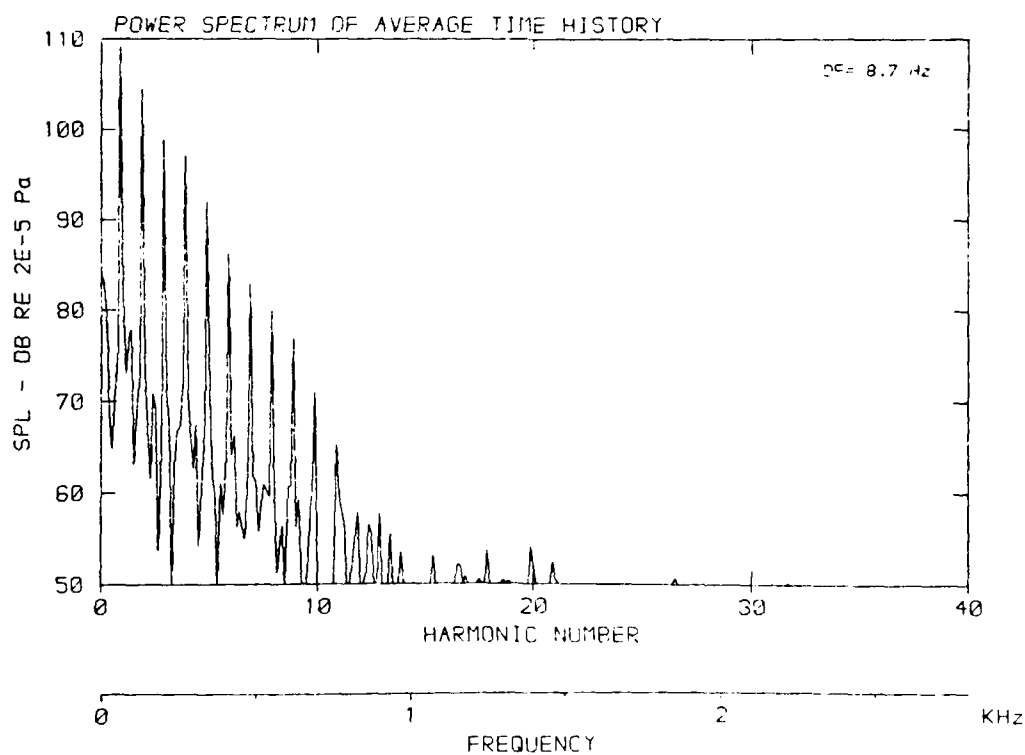
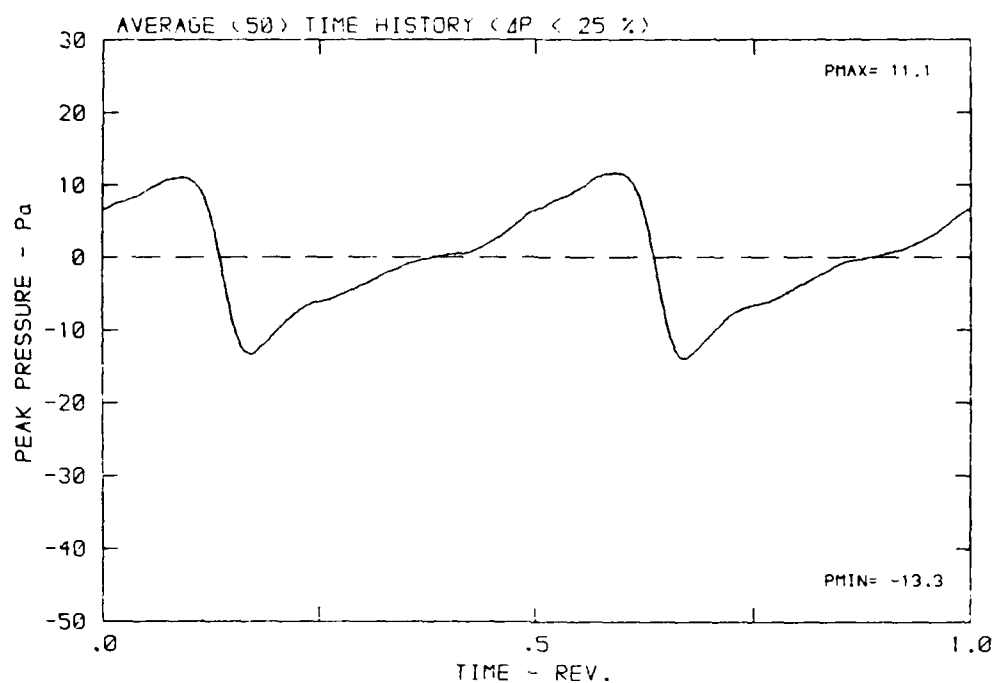
DATA POINT: FN-1 RUN: 166 MP: 4

β : 19.9° MH: .6745 n: 2100 rpm ν/α : .231 ϕ : 3.6° T: 287.5 K



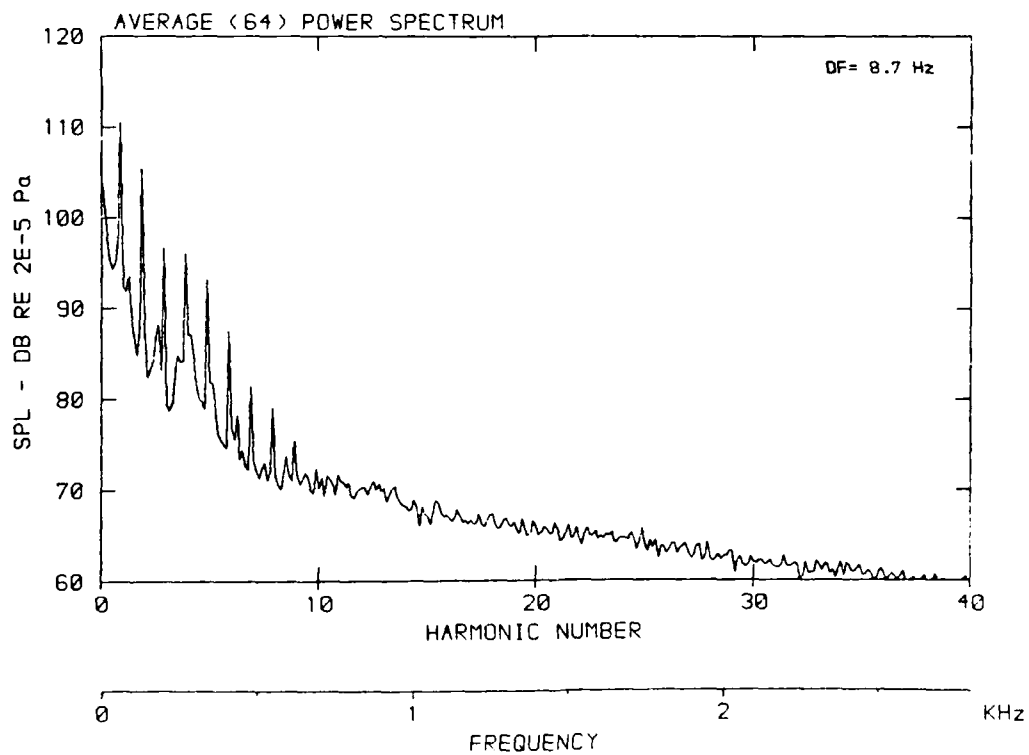
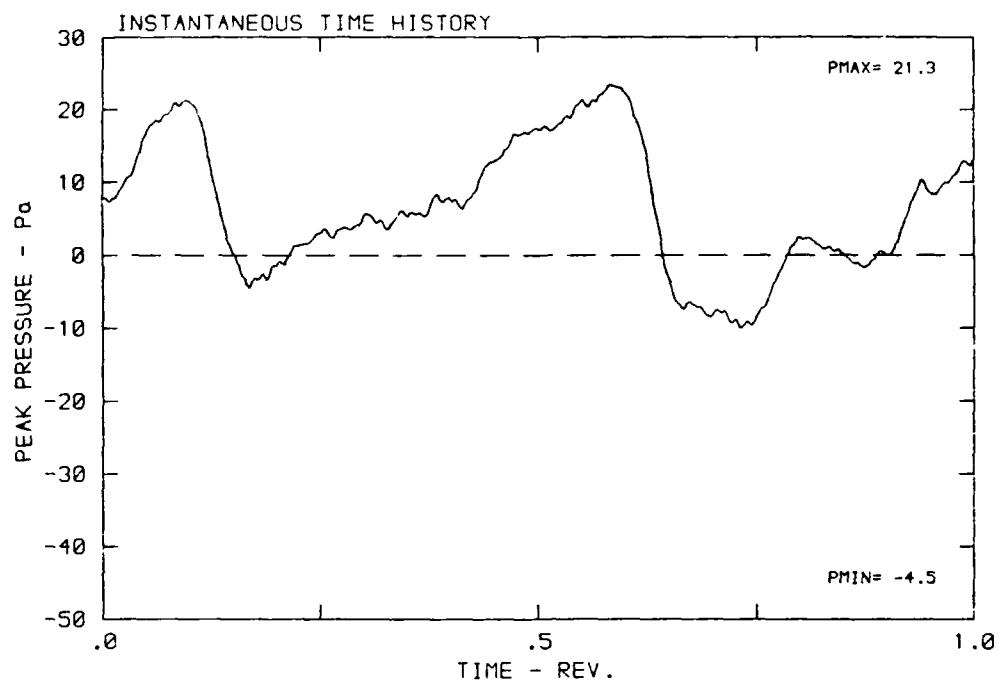
DATA POINT: FN-1 RUN: 166 MP: 4

β : 19.9° MH: .6745 n: 2100 rpm v/u: .231 ϕ : 3.6° T: 287.5 K



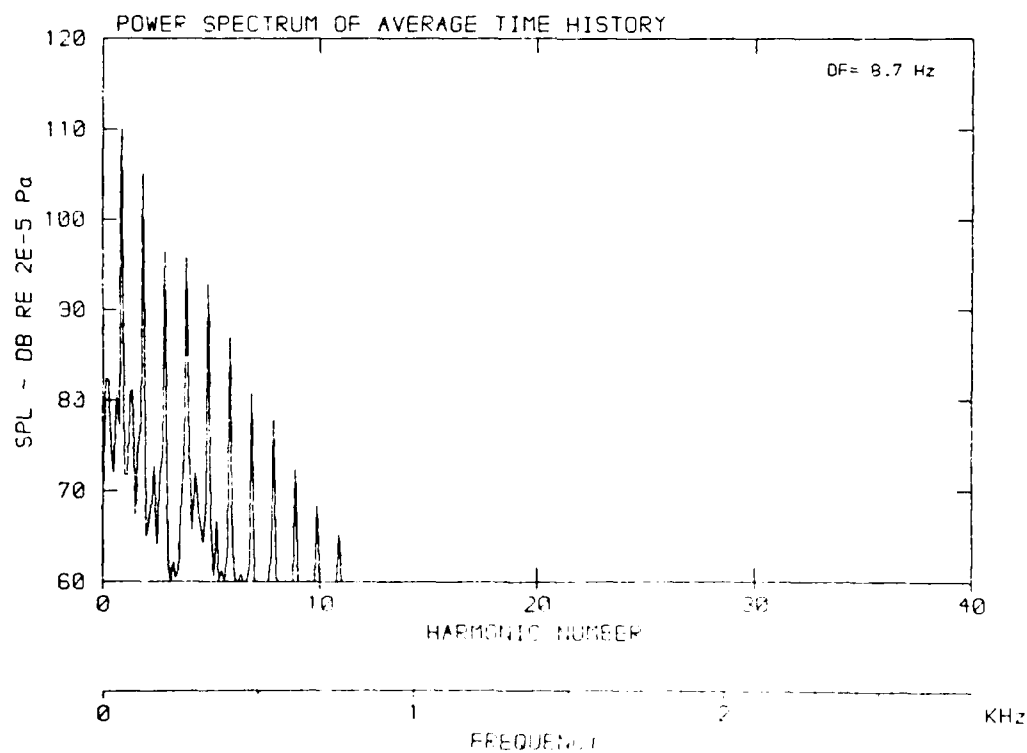
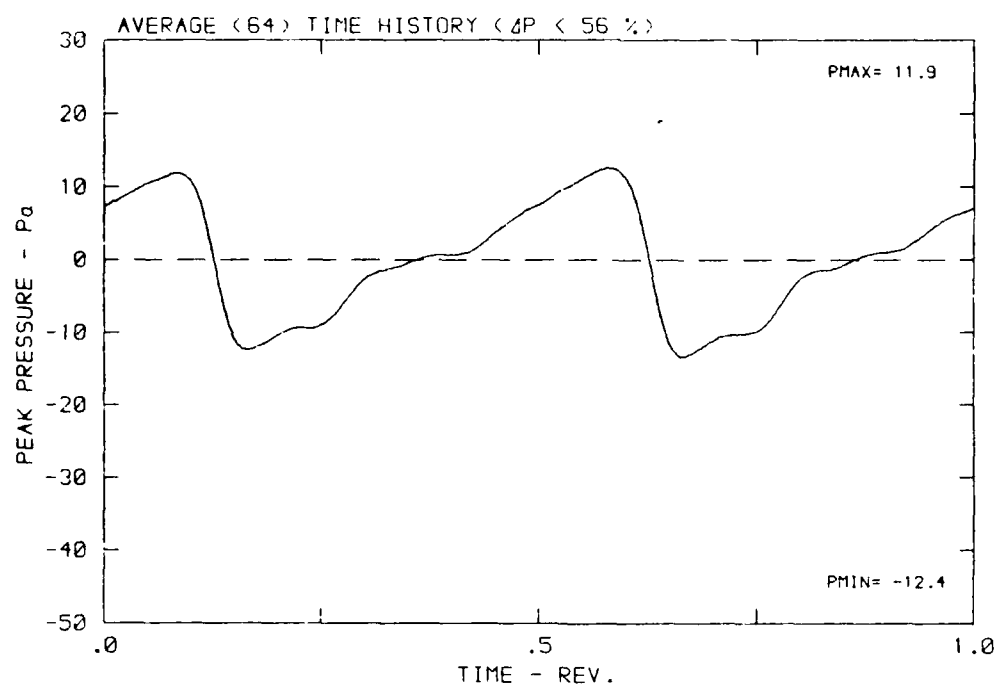
DATA POINT: FN-1 RUN: 166 MP: 5

β : 19.9° MH: .6745 n: 2100 rpm v/u : .231 ϕ : 3.6° T: 287.5 K



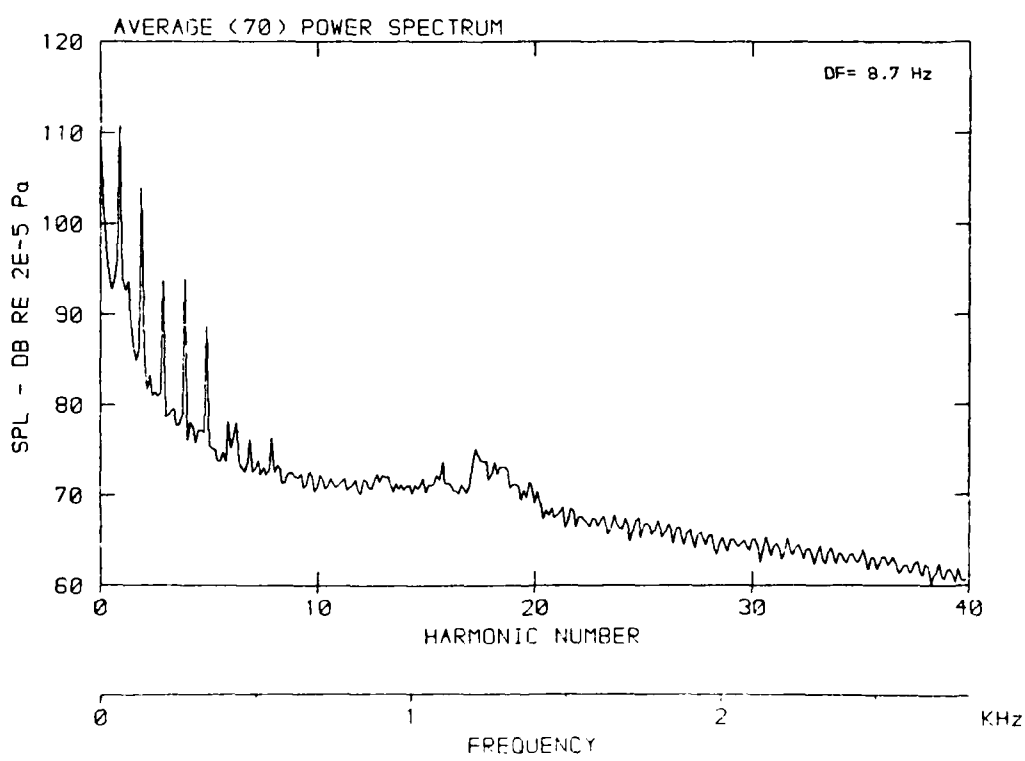
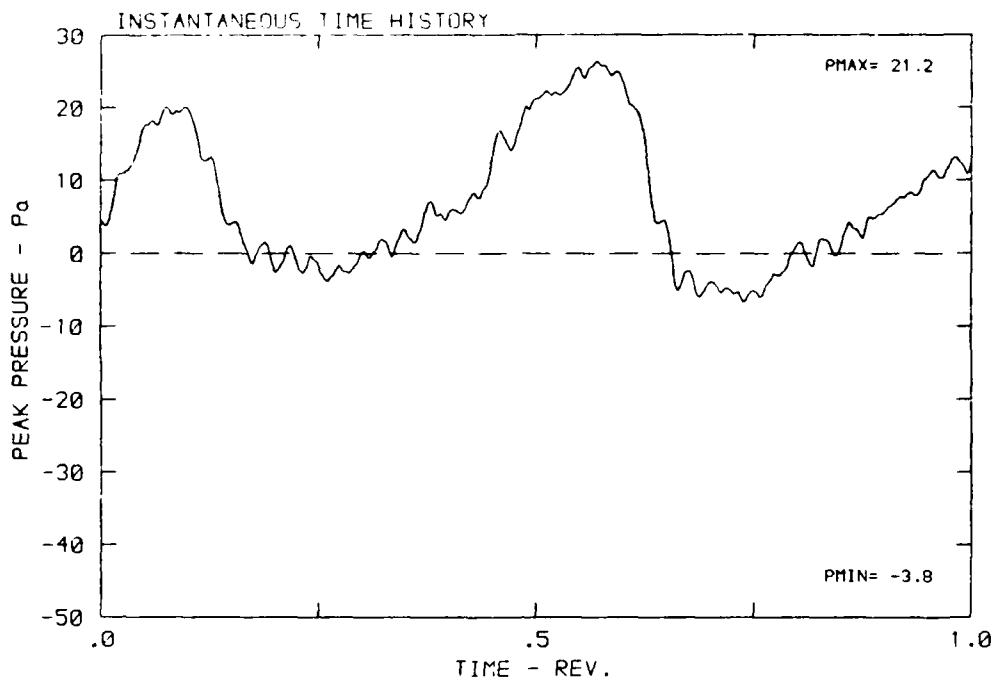
DATA POINT: FN-1 RUN: 166 MP: 5

β : 19.9° MH: .6745 n: 2100 rpm v/u : .231 ϕ : 3.6° T: 287.5 K



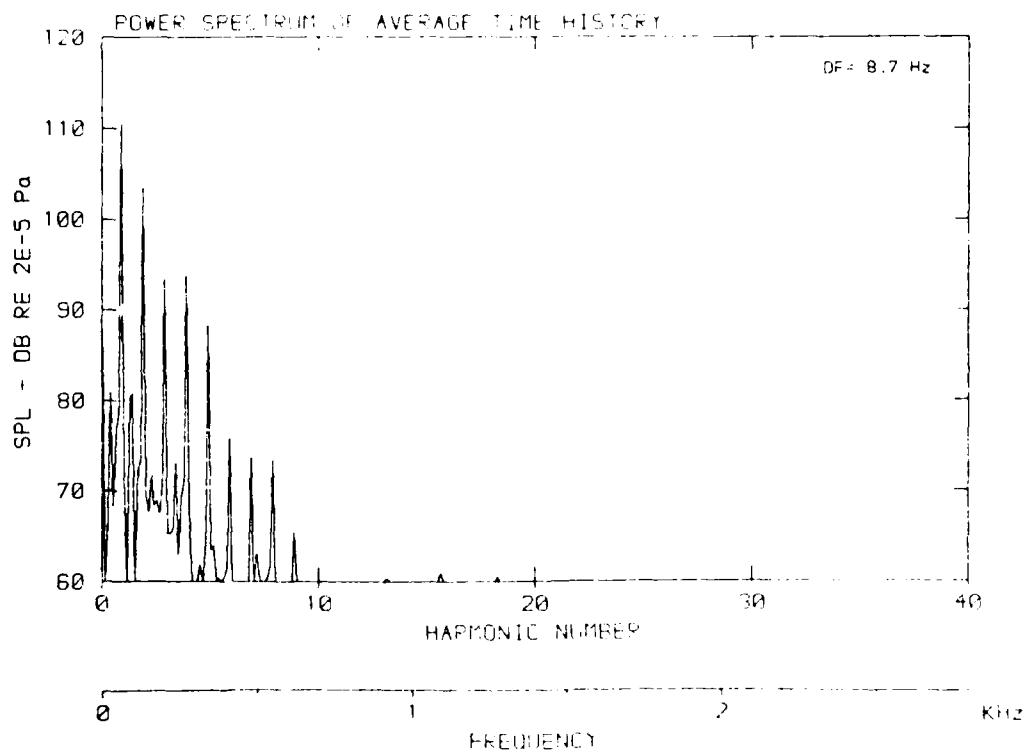
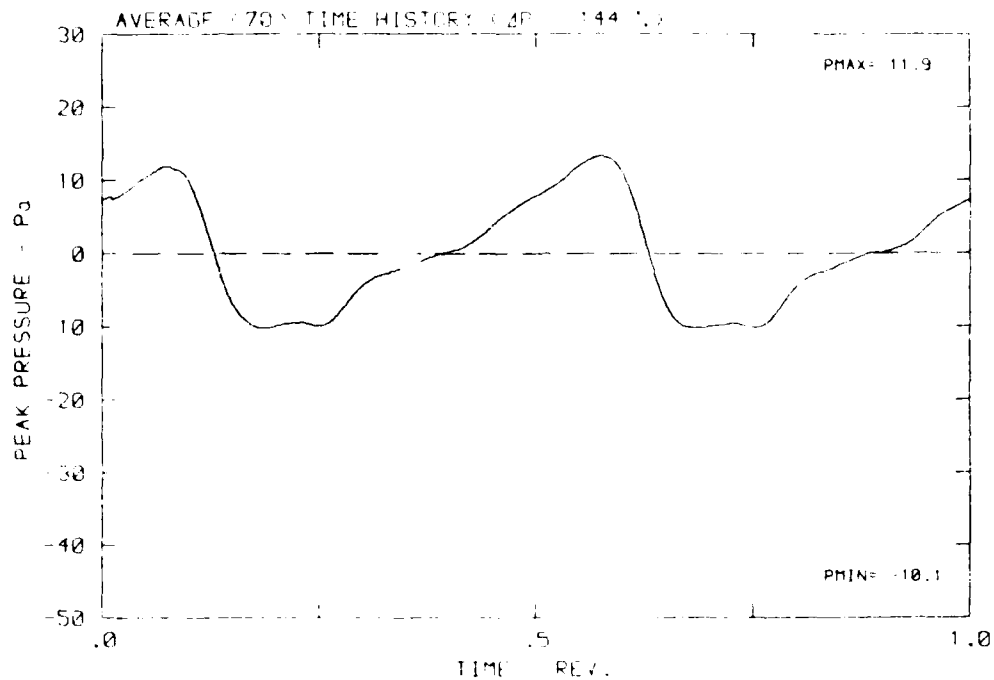
DATA POINT: FN-1 RUN: 166 MP: 6

β : 19.9° MH: .6745 n: 2100 rpm ν : .231 ϕ : 3.6° T: 287.5 K



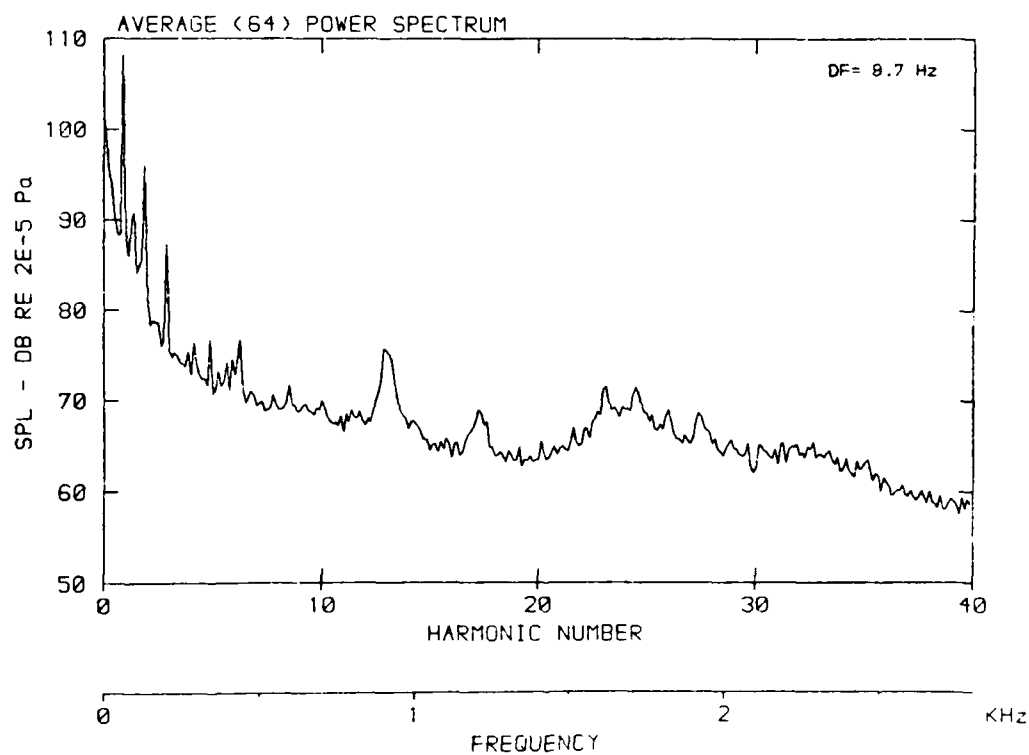
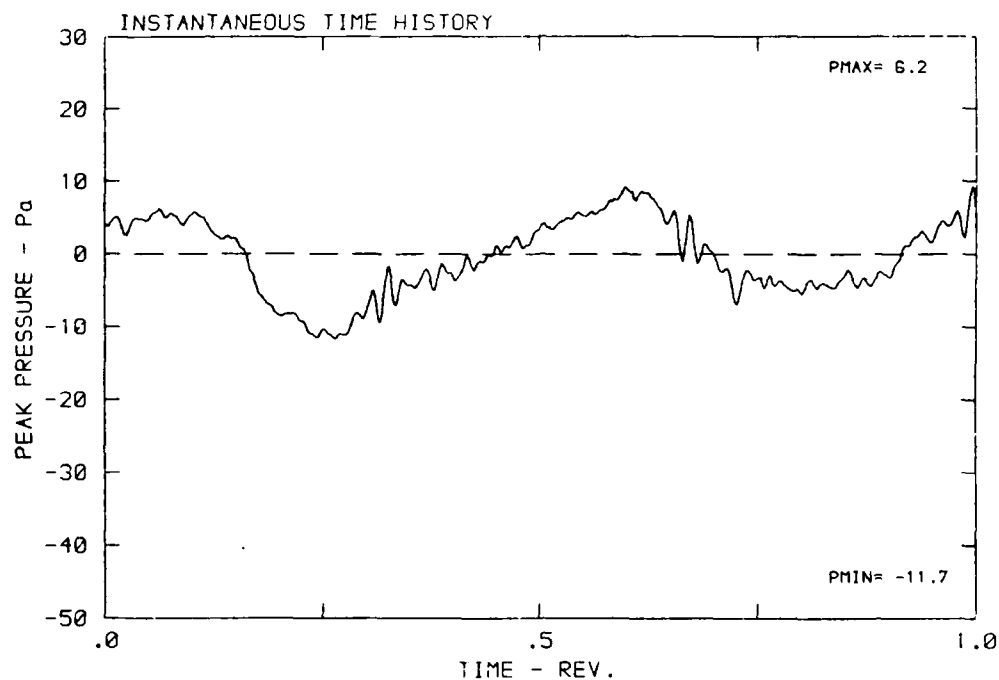
DATA POINT: FN-1 PIN: 1E+ MF: 5

β : 19.9° MH: .6745 n: 2100 rpm v: .231 p: 3.6° T: 287.5 K



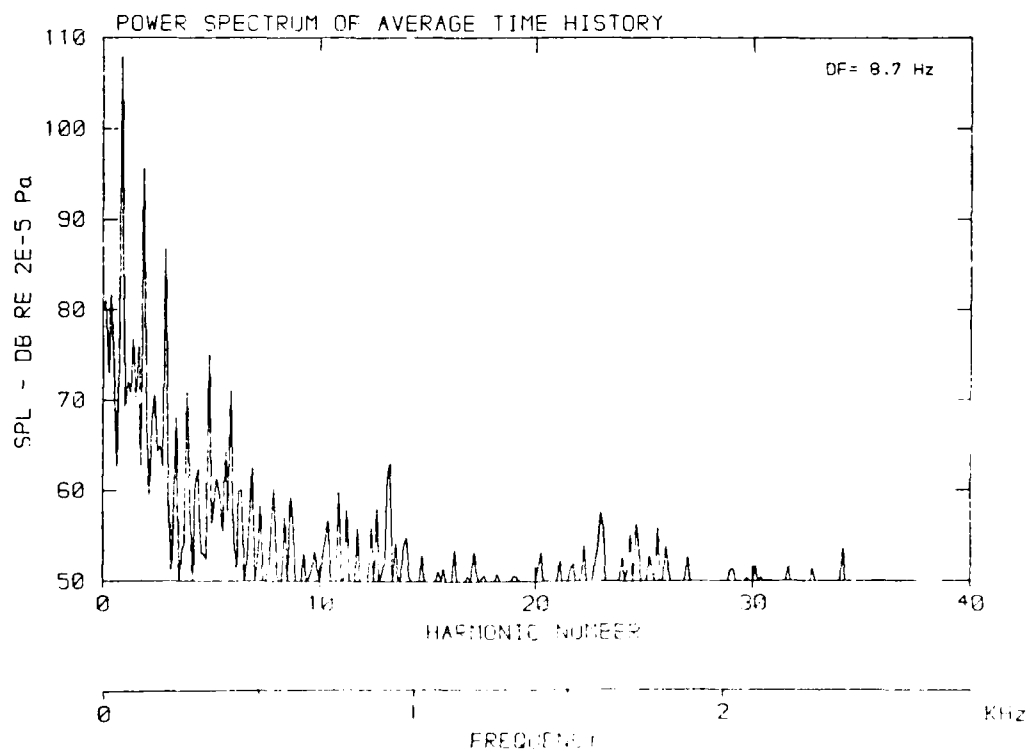
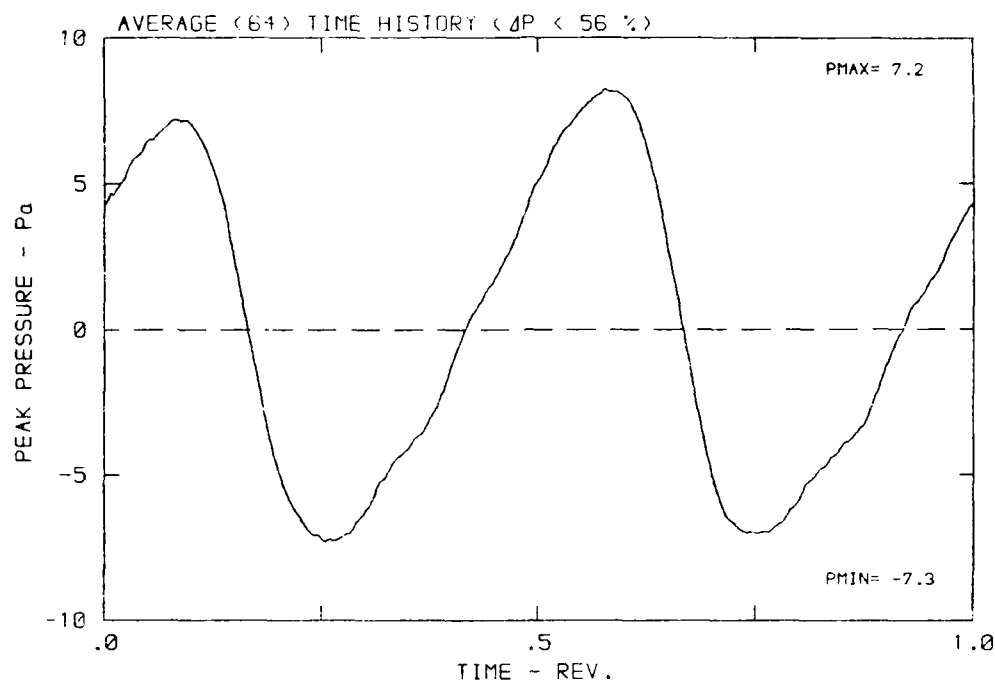
DATA POINT: FN-1 RUN: 166 MP: 7

β : 19.9° MH: .6745 n: 2100 rpm v/u : .231 ϕ : 3.6° T: 287.5 K



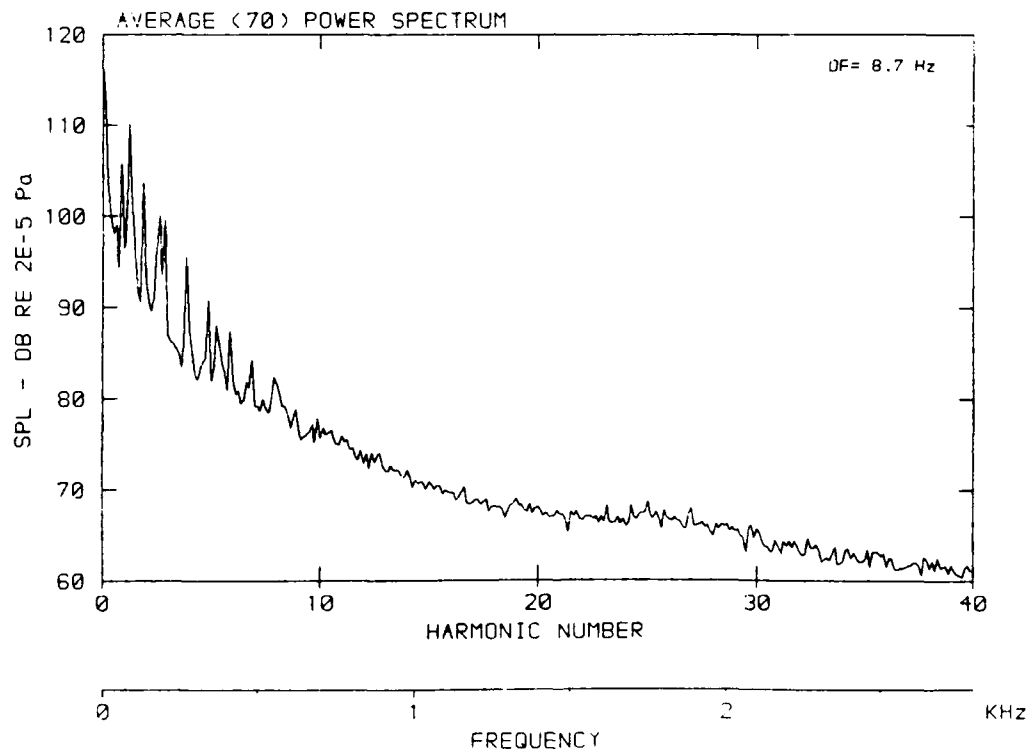
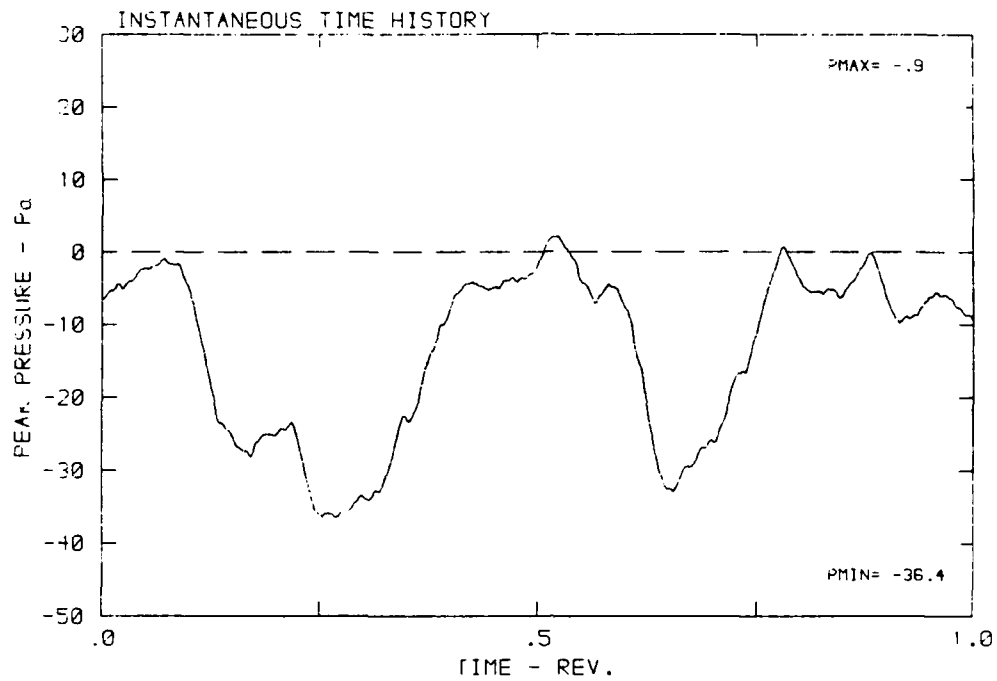
DATA POINT: FN-1 RUN: 166 MP: 7

β : 19.9° MH: .6745 n: 2100 rpm v/u: .231 ϕ : 3.6° T: 287.5 K



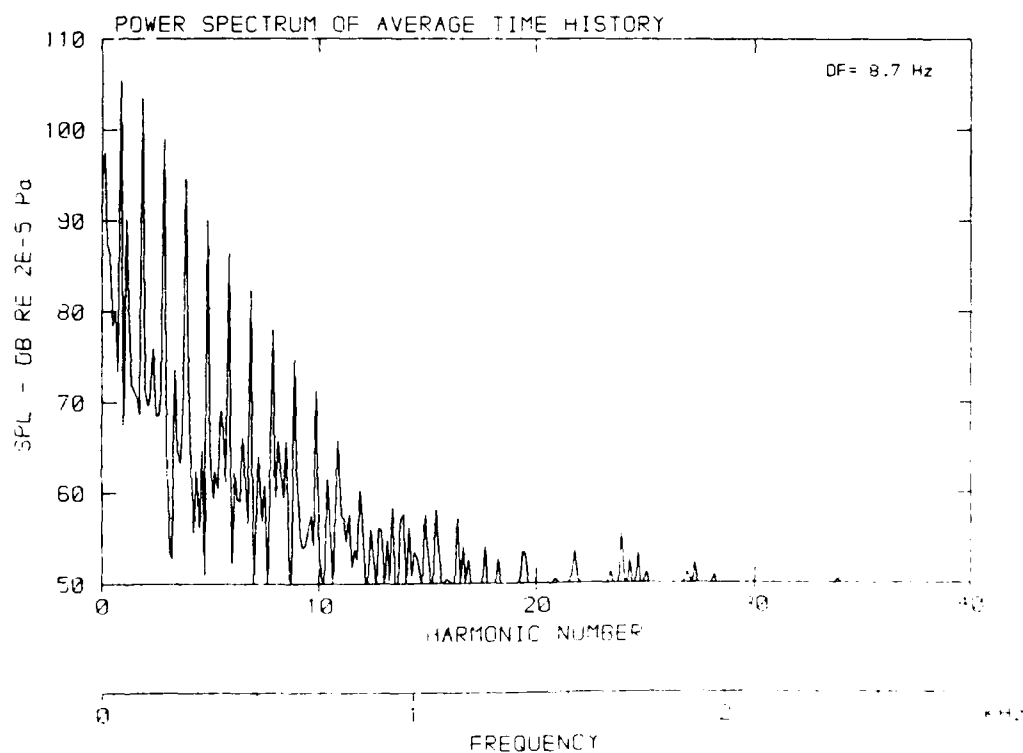
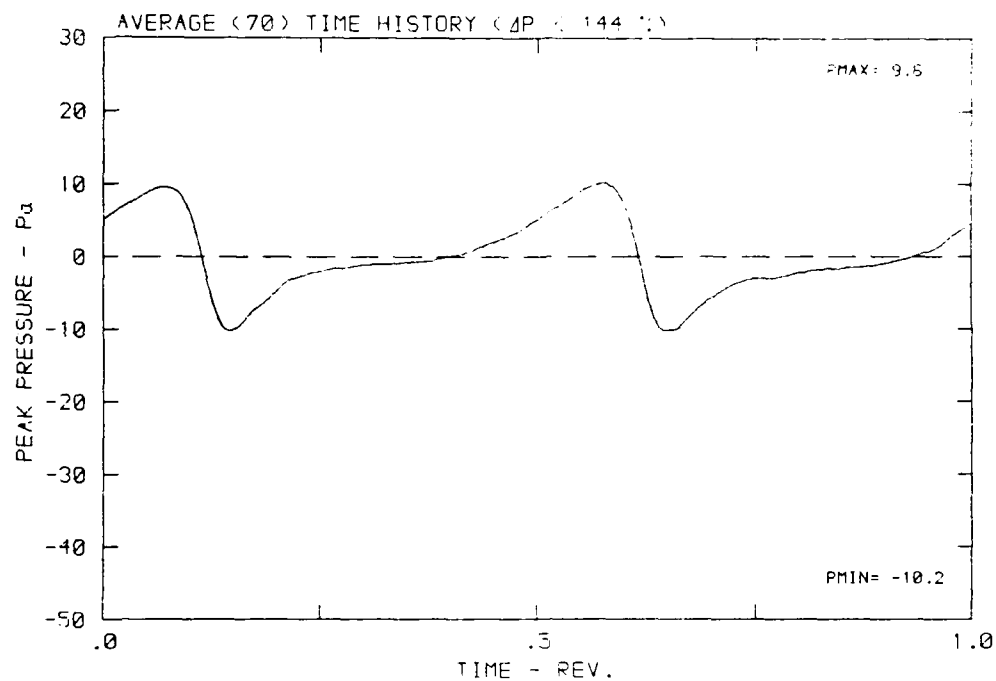
DATA POINT: FN-1 RUN: 166 MP: 8

p: 19.9° MH: .6745 n: 2100 rpm v/u: .231 ϕ : 3.6° T: 287.5 K



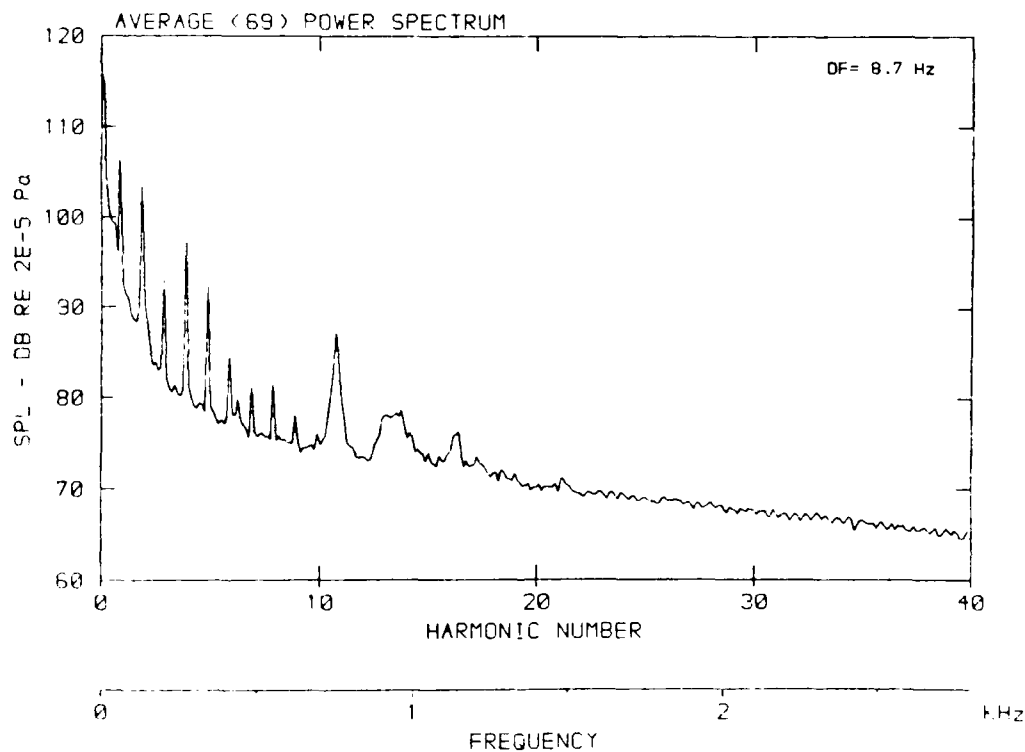
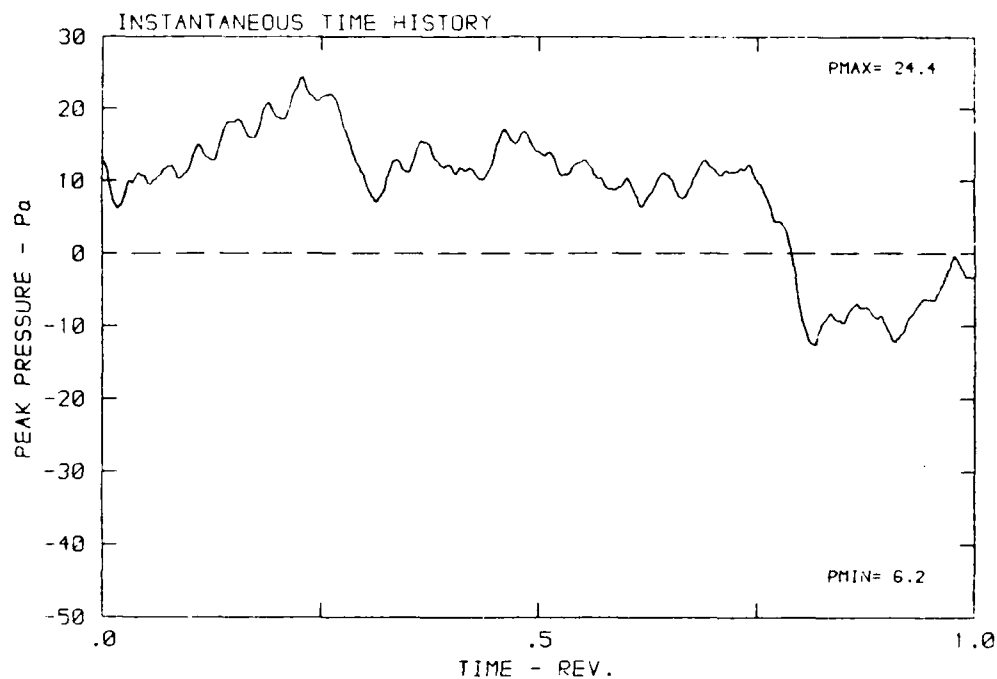
DATA POINT: FN-1 RUN: 166 MP: 8

β : 19.9° MH: .6745 n: 2100 rpm v/u : .231 ϕ : 3.6° T: 287.5 K



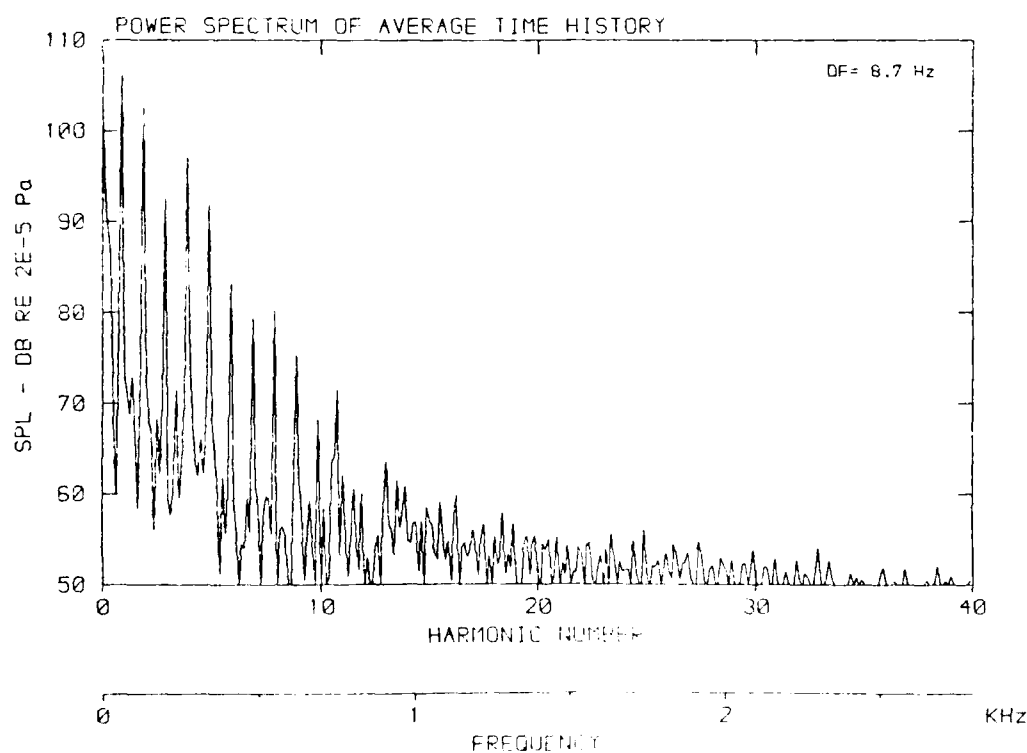
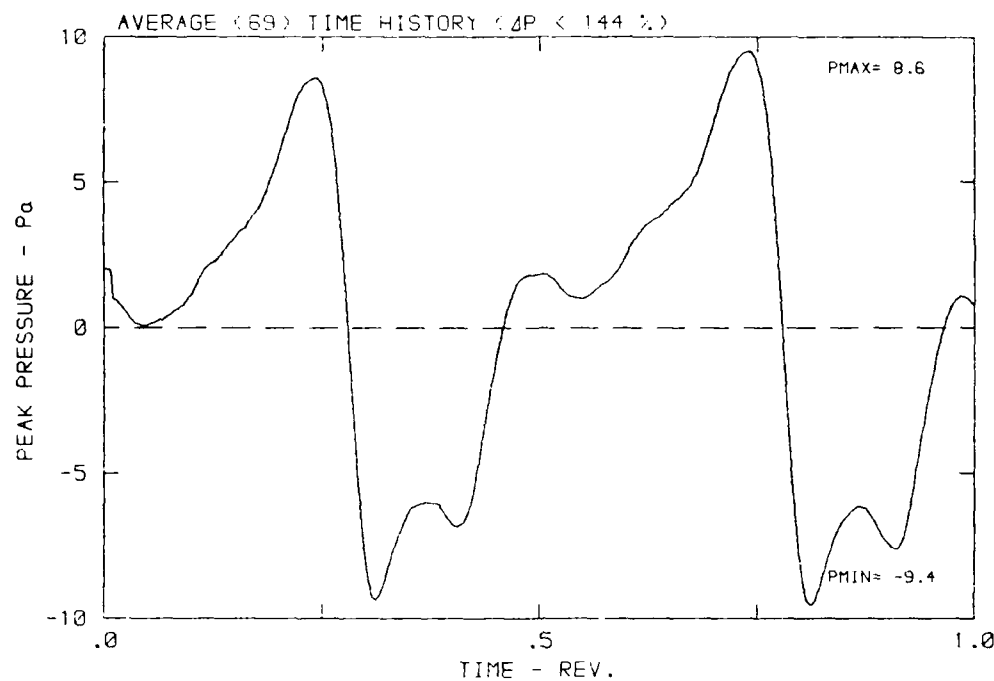
DATA POINT: FN-1 RUN: 166 MP: 9

β : 19.9° MH: .6745 n: 2100 rpm vru: .031 ϕ : 3.6° T: 267.5 K



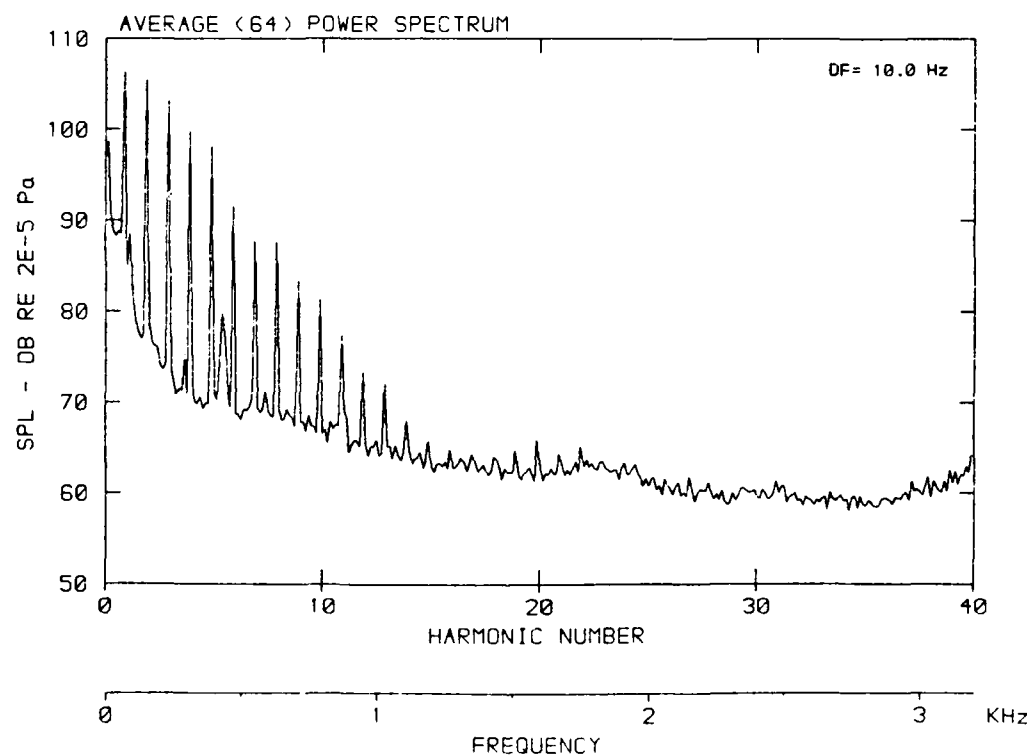
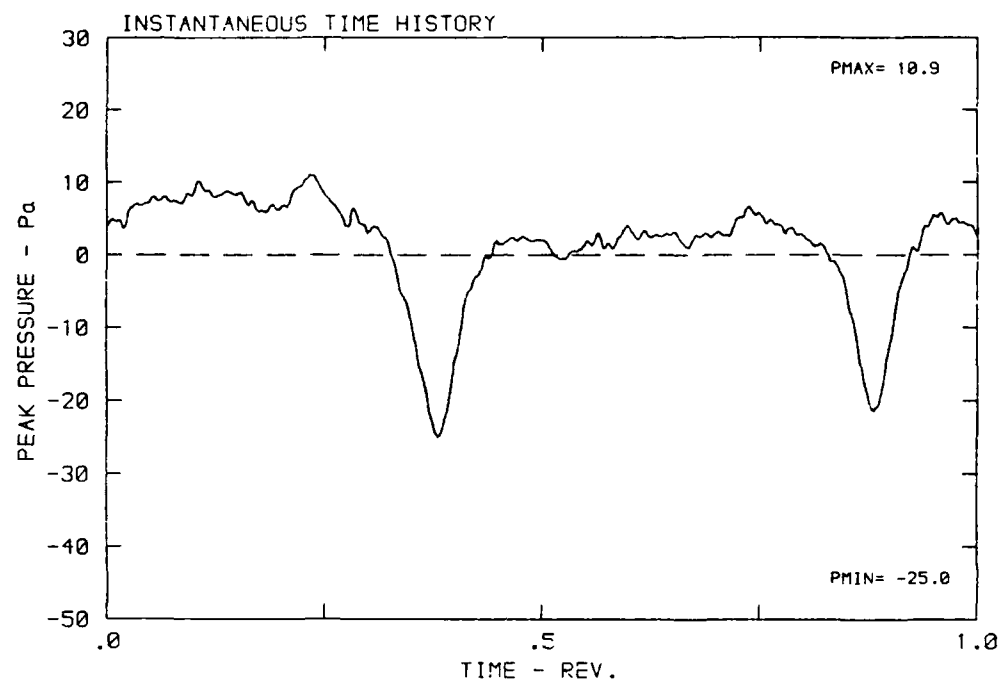
DATA POINT: FN-1 RUN: 166 MP: 9

β : 19.9° MH: .6745 n: 2100 rpm ν/α : .231 ϕ : 3.6° T: 287.5 K



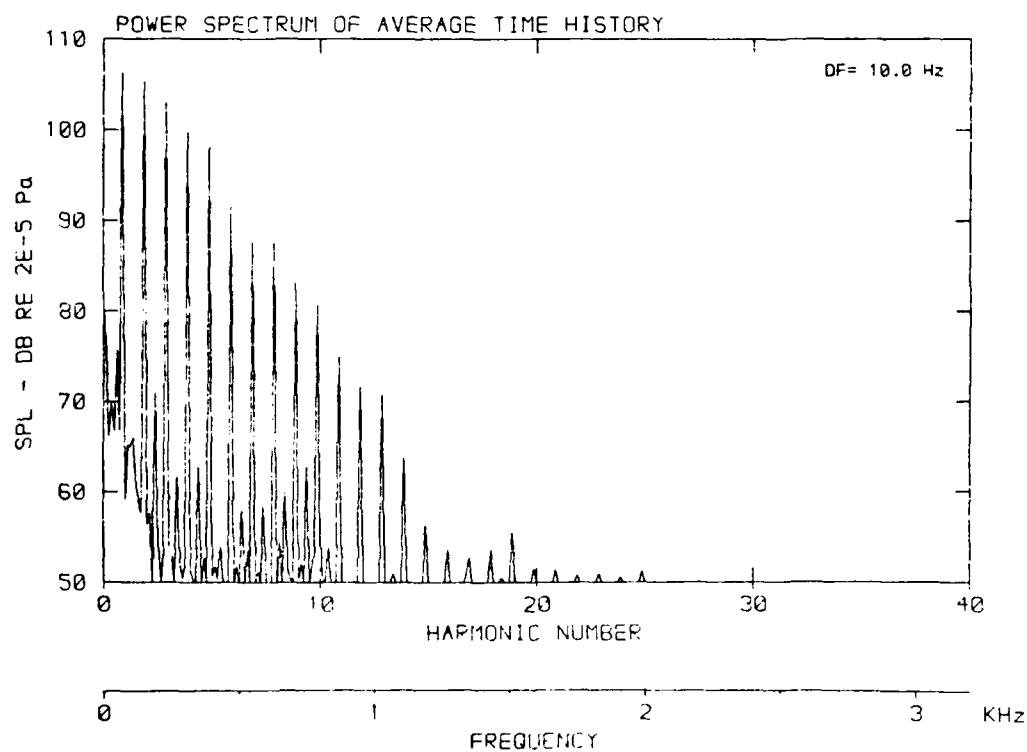
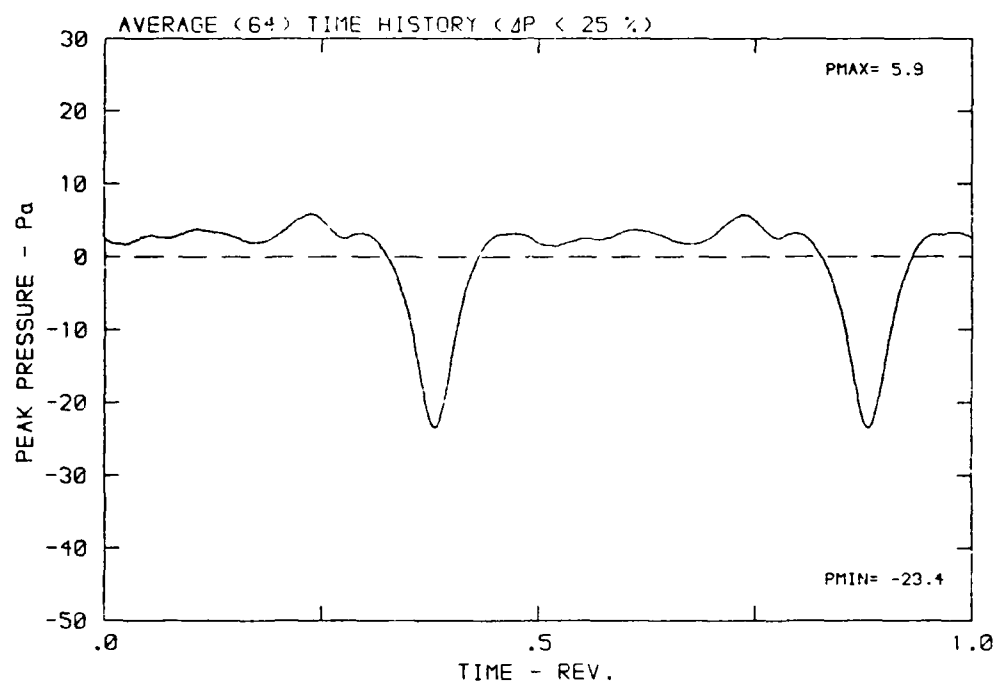
DATA POINT: FN-2 RUN: 167 MP: |

β : 19.9° MH: .7655 n: 2400 rpm v/u: .202 ϕ : 3.6° T: 288.2 K



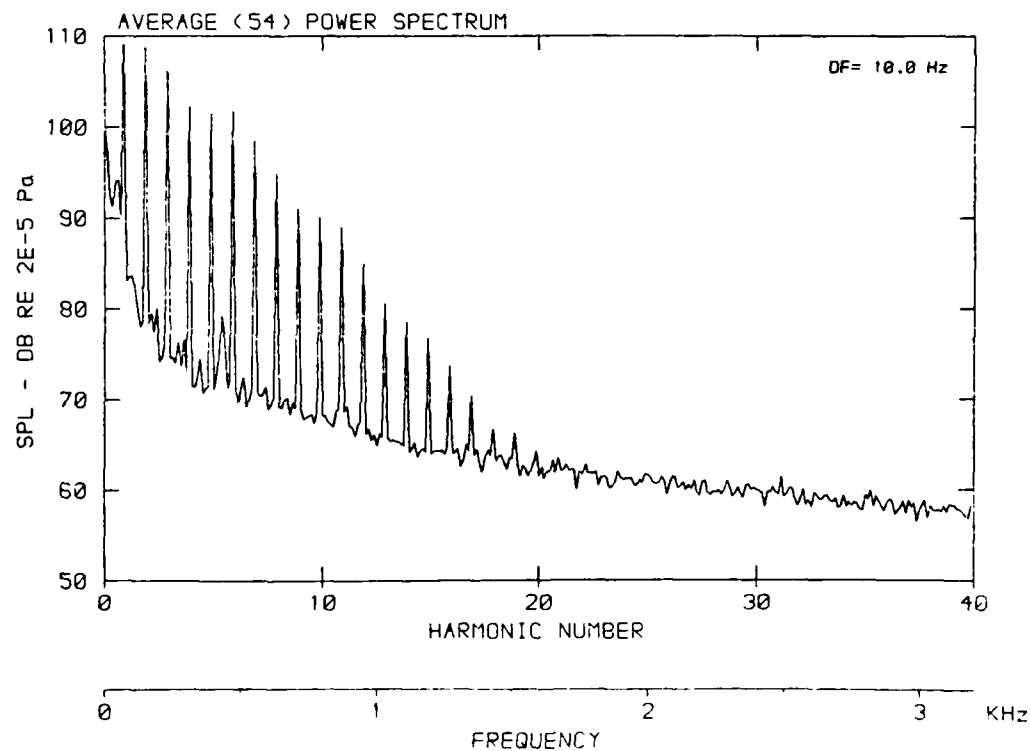
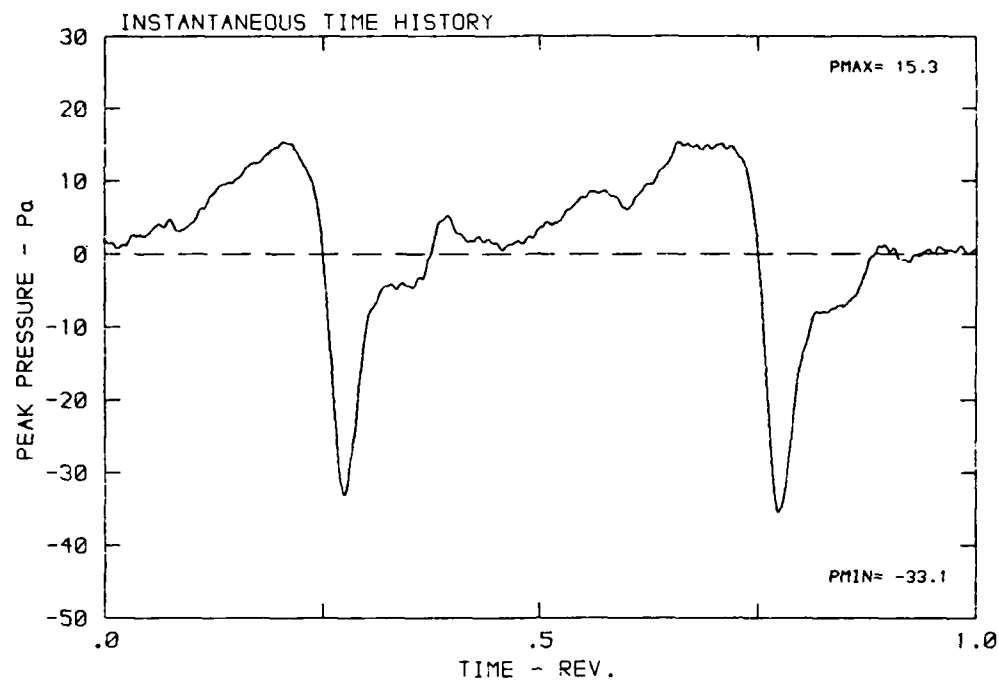
DATA POINT: FN-2 RUN: 167 MP: 1

β : 19.9° MH: .7655 n: 2400 rpm v/u: .202 ϕ : 3.6° T: 288.2 K



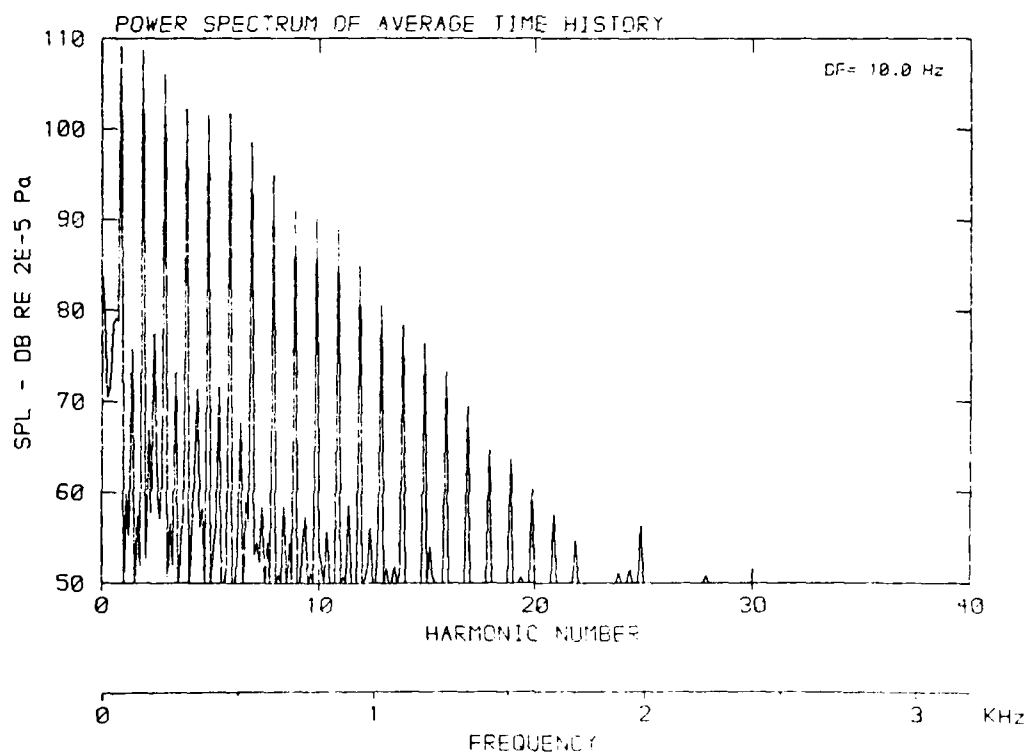
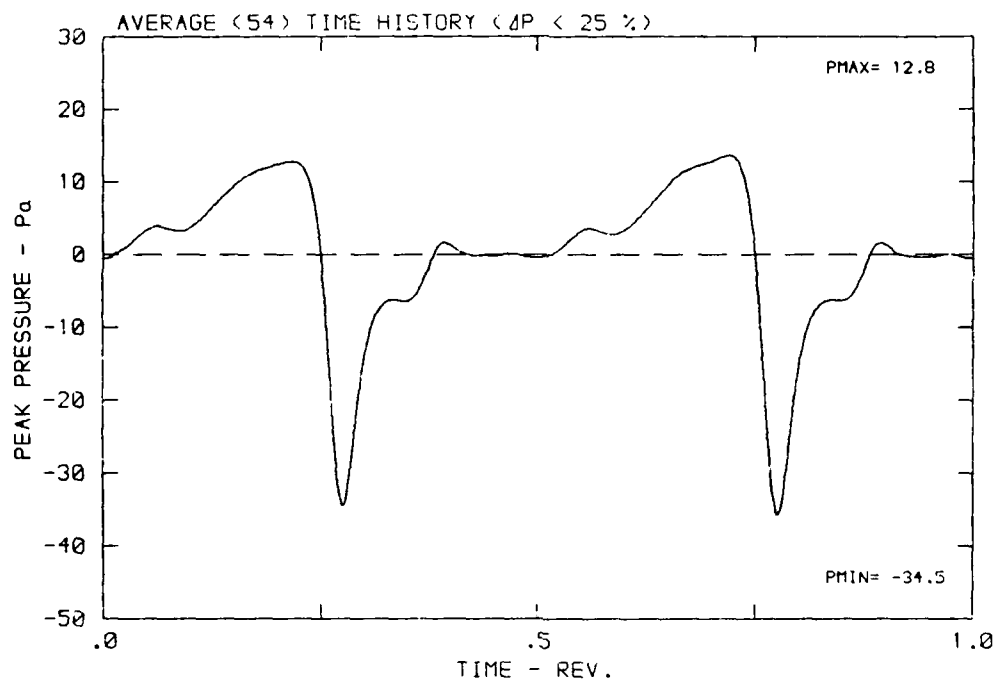
DATA POINT: FN-2 RUN: 167 MF: 2

β : 19.9° MH: .7655 n: 2400 rpm v/u : .202 ϕ : 3.6° T: 288.2 K



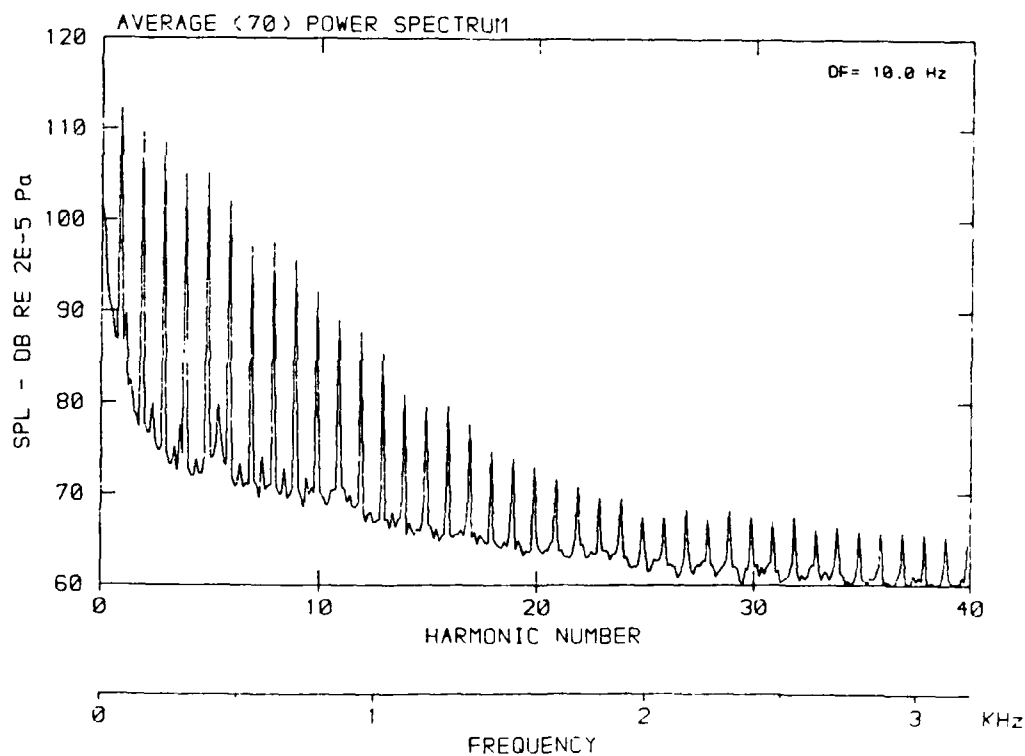
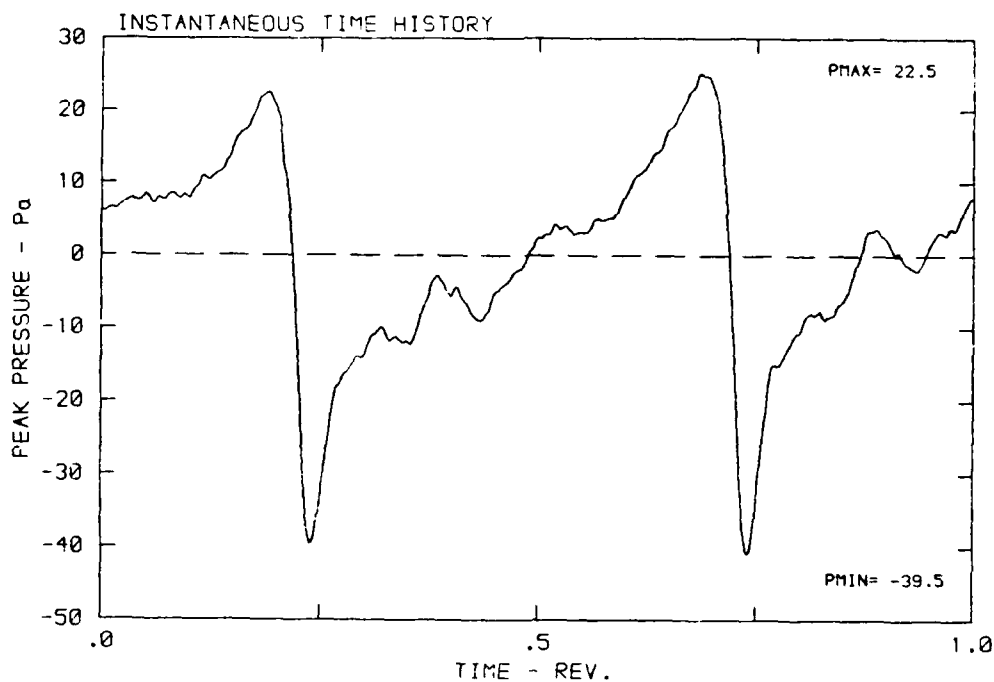
DATA POINT: FN-2 RUN: 167 MP: 2

β : 19.9° MH: .7655 n: 2400 rpm v/u : .202 ϕ : 3.6° T: 288.2 K



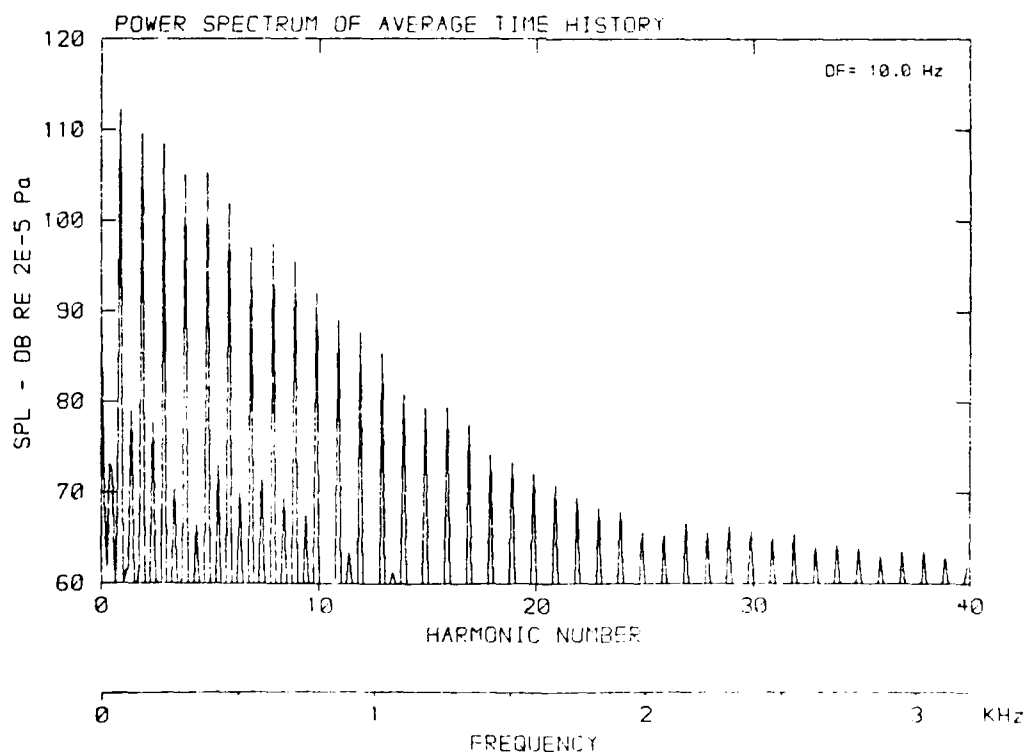
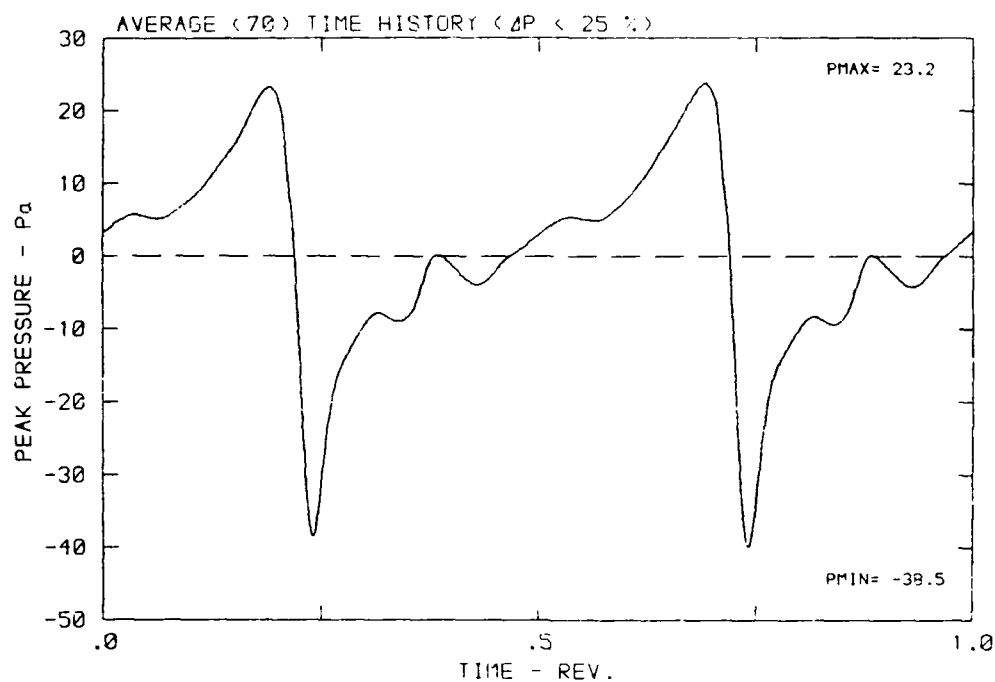
DATA POINT: FN-2 RUN: 167 MP: 3

β : 19.9° MH: .7655 n: 2400 rpm v/u : .202 ϕ : 3.6° T: 298.2 K



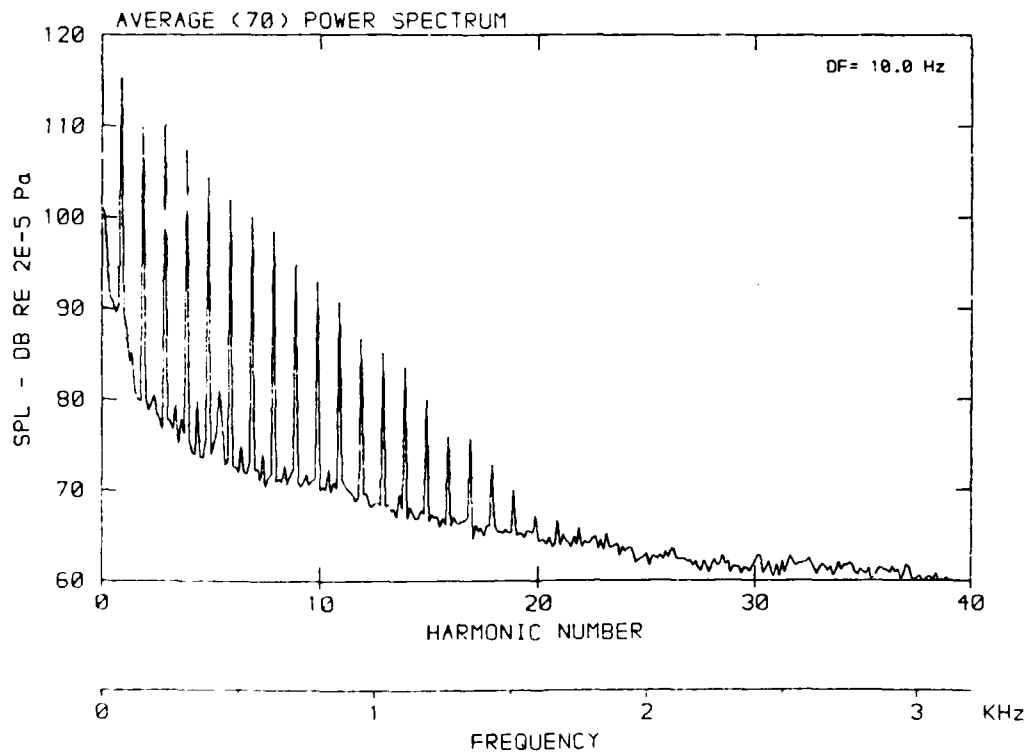
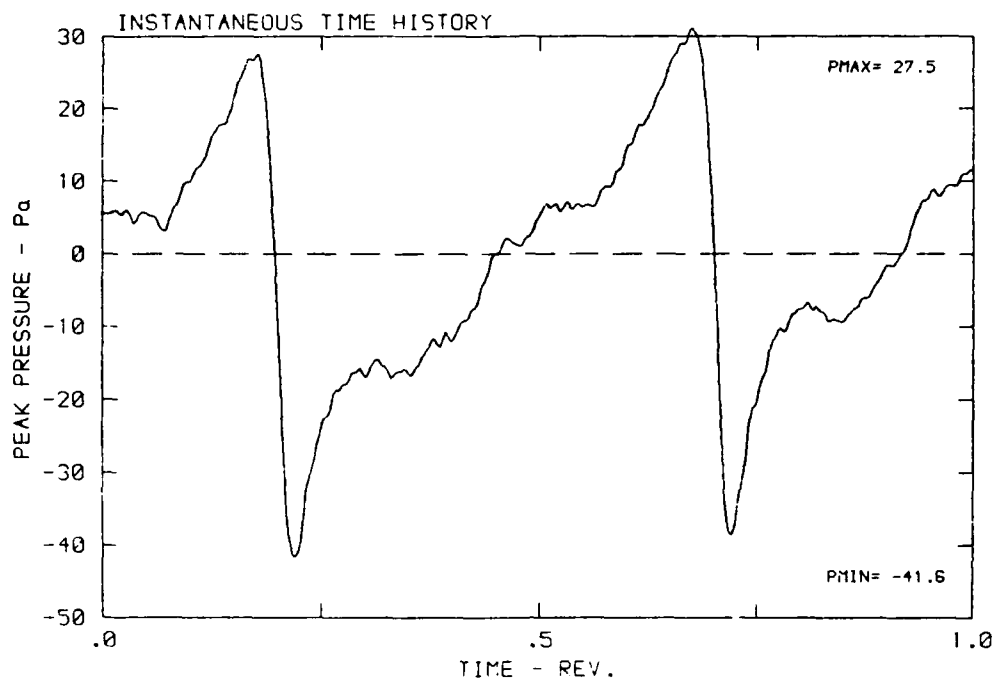
DATA POINT: FN-2 RUN: 167 MP: 3

β : 19.9° MH: .7655 n: 2400 rpm v/u: .202 ϕ : 3.6° T: 288.2 K



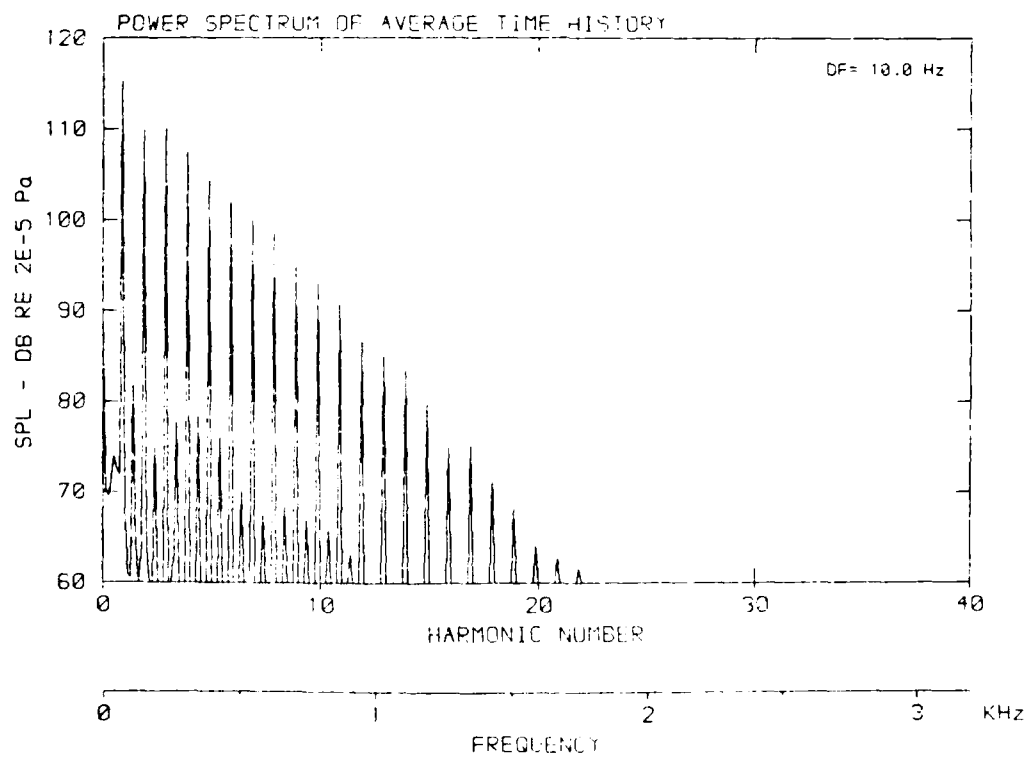
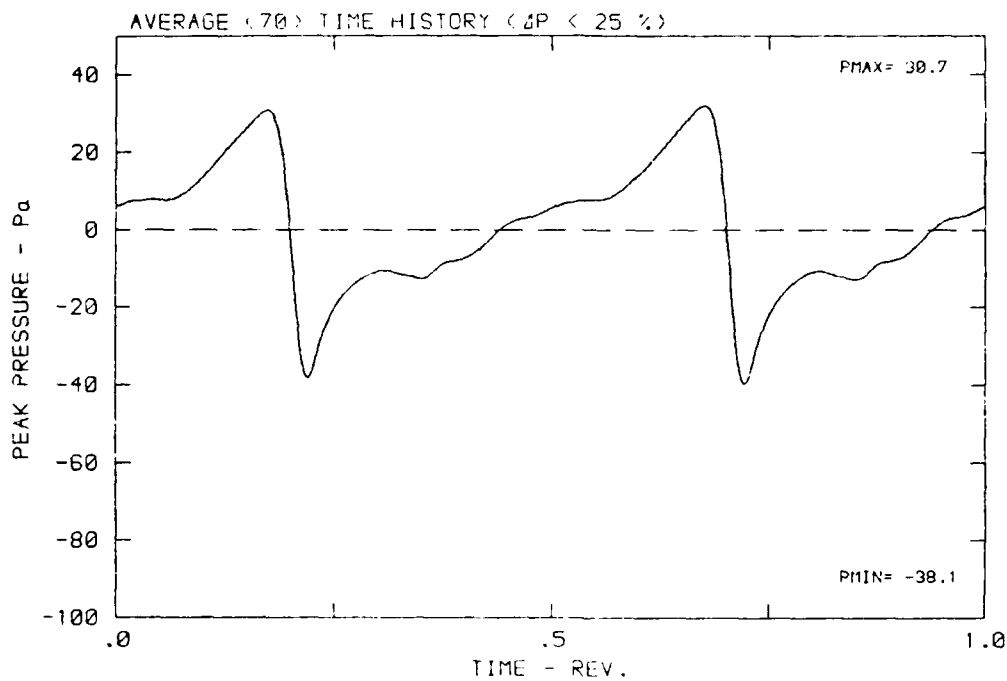
DATA POINT: FN-2 RUN: 167 MP: +

β : 19.9° MH: .7655 n: 2400 rpm v/u : .202 ϕ : 3.6° T: 288.2 K



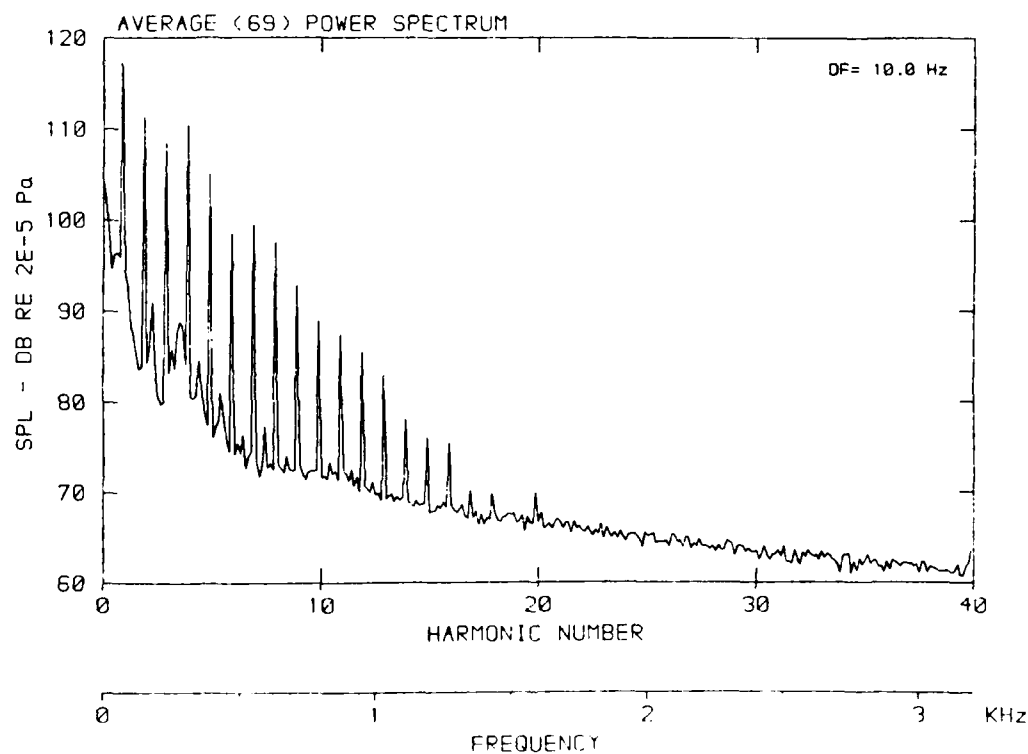
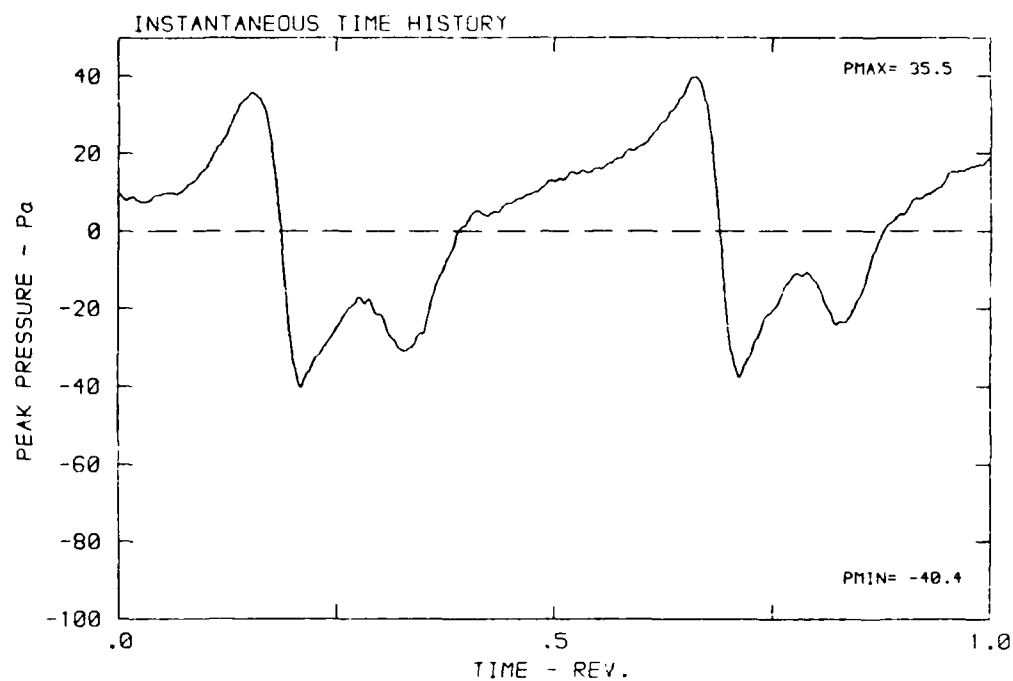
DATA POINT: FN-2 RUN: 167 MF: 4

β : 19.9° MH: .7655 n: 2400 rpm v/u : .202 ϕ : 3.6° T: 288.2 K



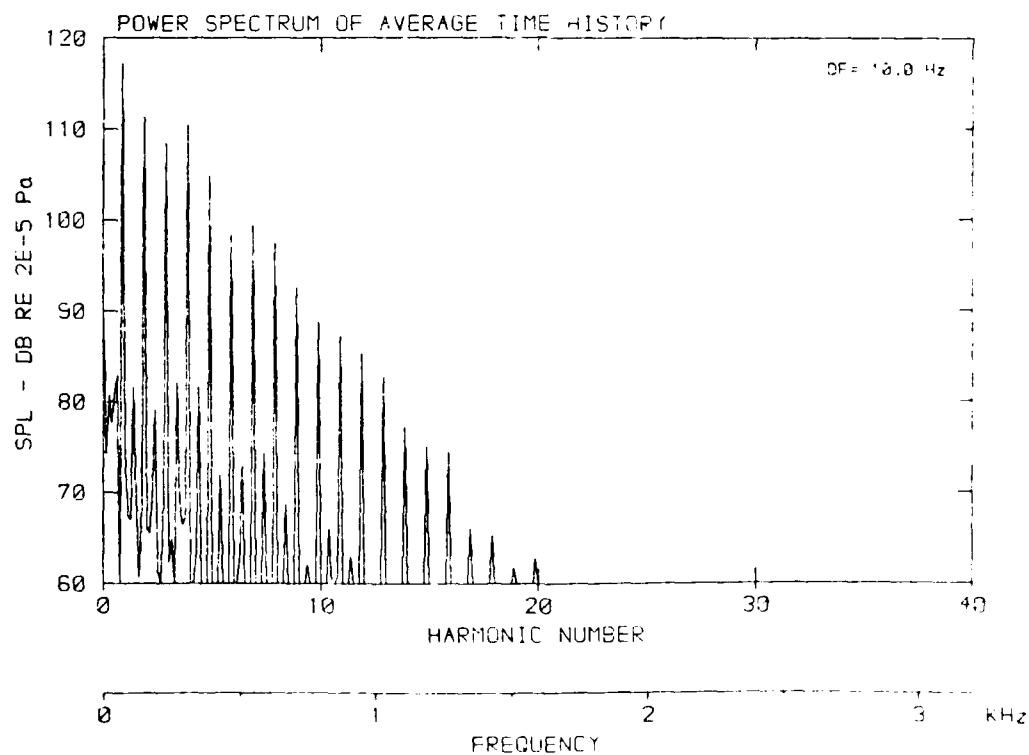
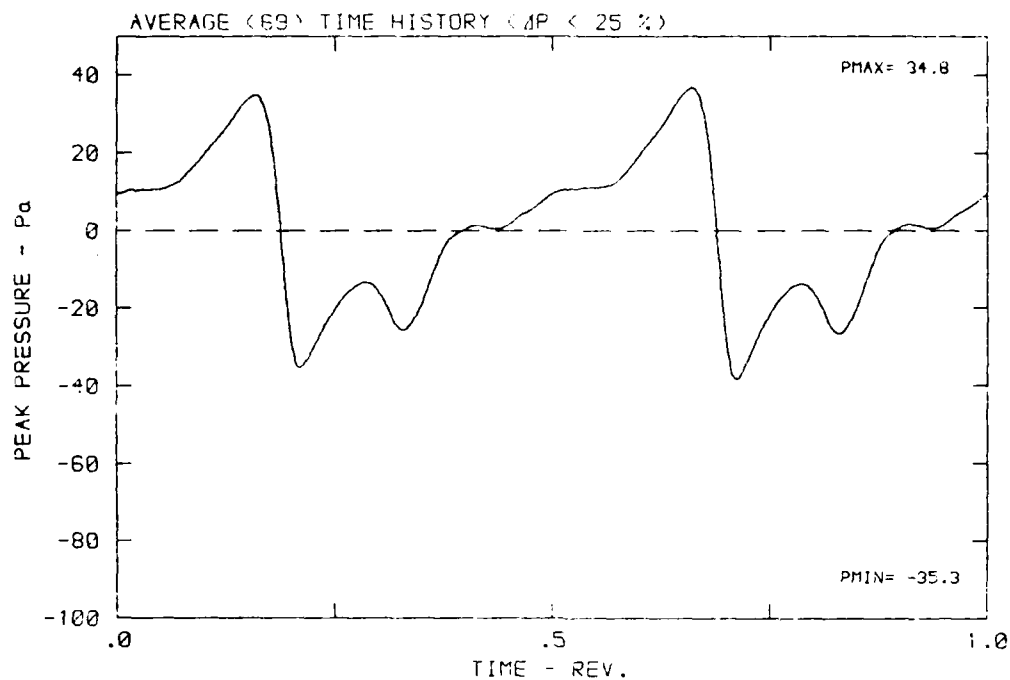
DATA POINT: FN-2 RUN: 167 MP: E

B: 19.9° MH: .7655 n: 2400 rpm v/u: .202 ϕ : 3.6° T: 288.2 K



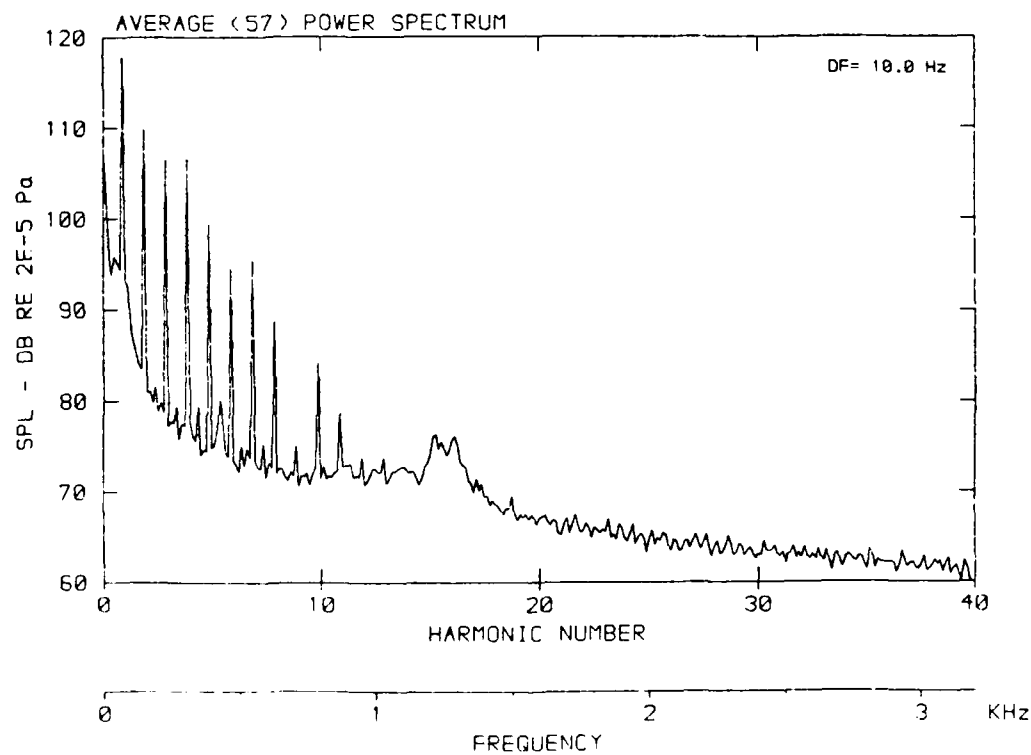
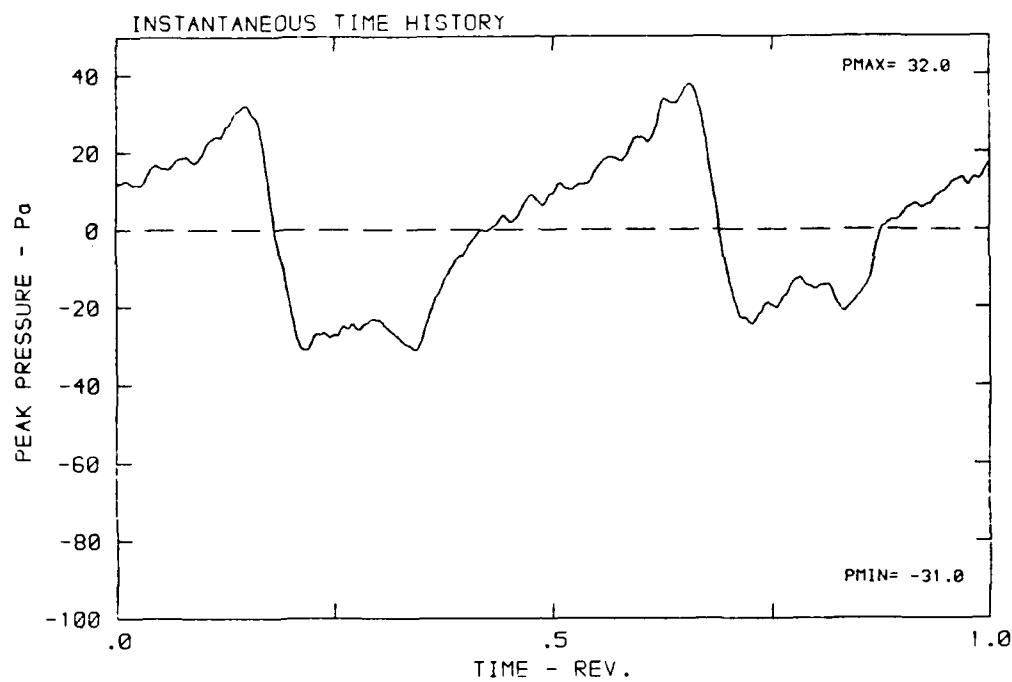
DATA POINT: FN-2 RUN: 167 MP: 5

β : 19.9° MH: .7655 n: 2400 rpm v/u : .202 ϕ : 3.6° T: 288.2 K



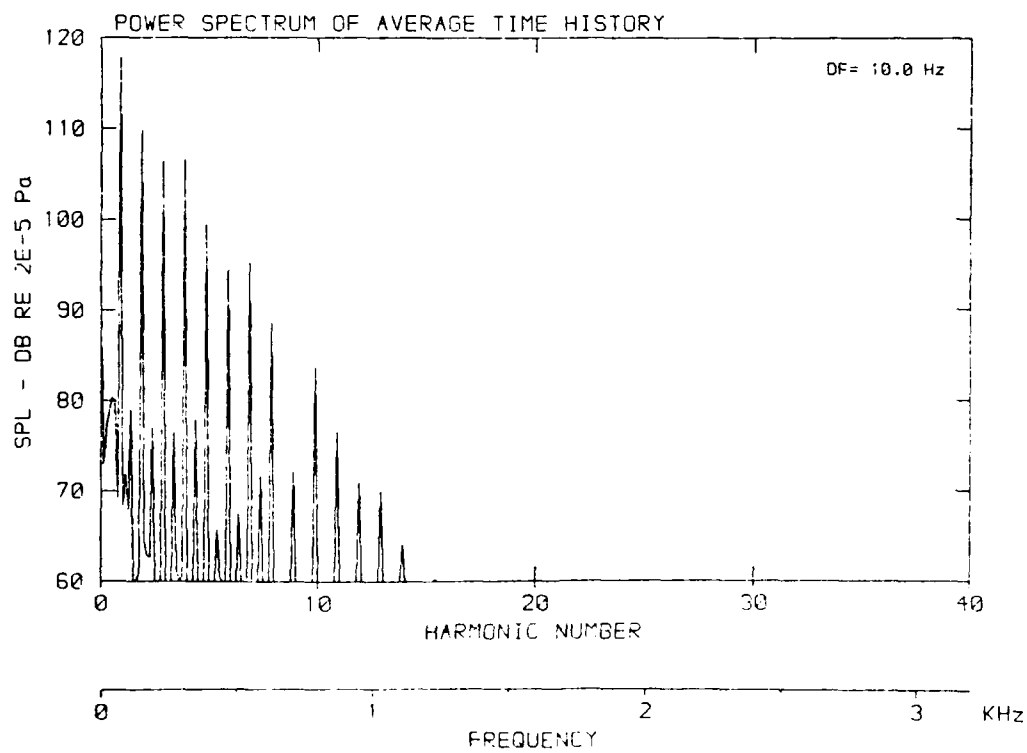
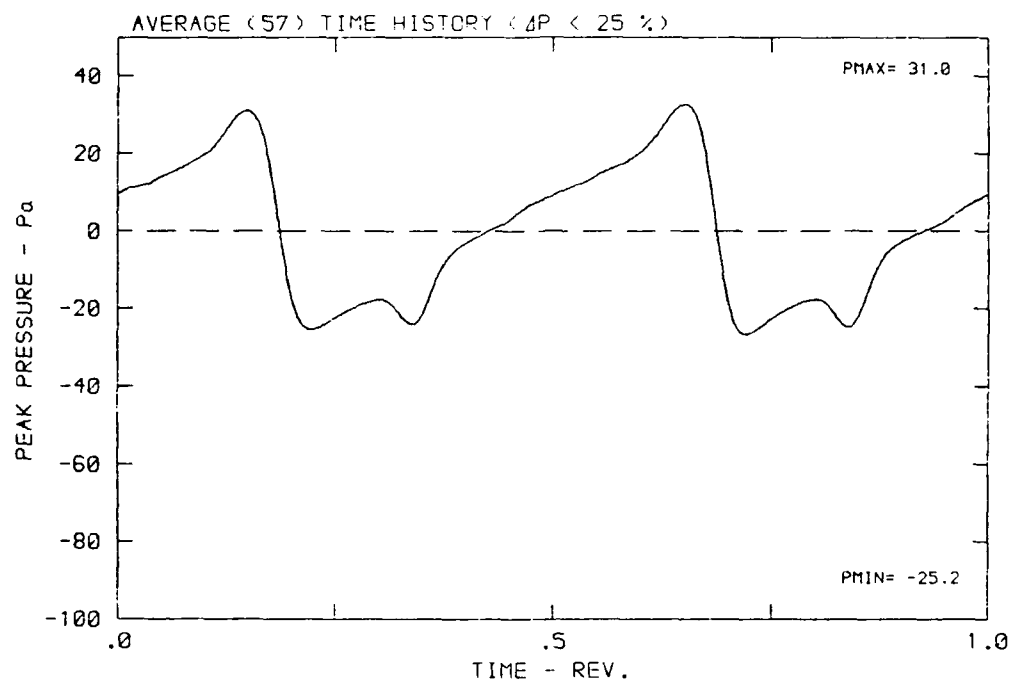
DATA POINT: FN-2 RUN: 167 MP: 6

β : 19.9° MH: .7655 n: 2400 rpm v/u: .202 ϕ : 3.6° T: 288.2 K



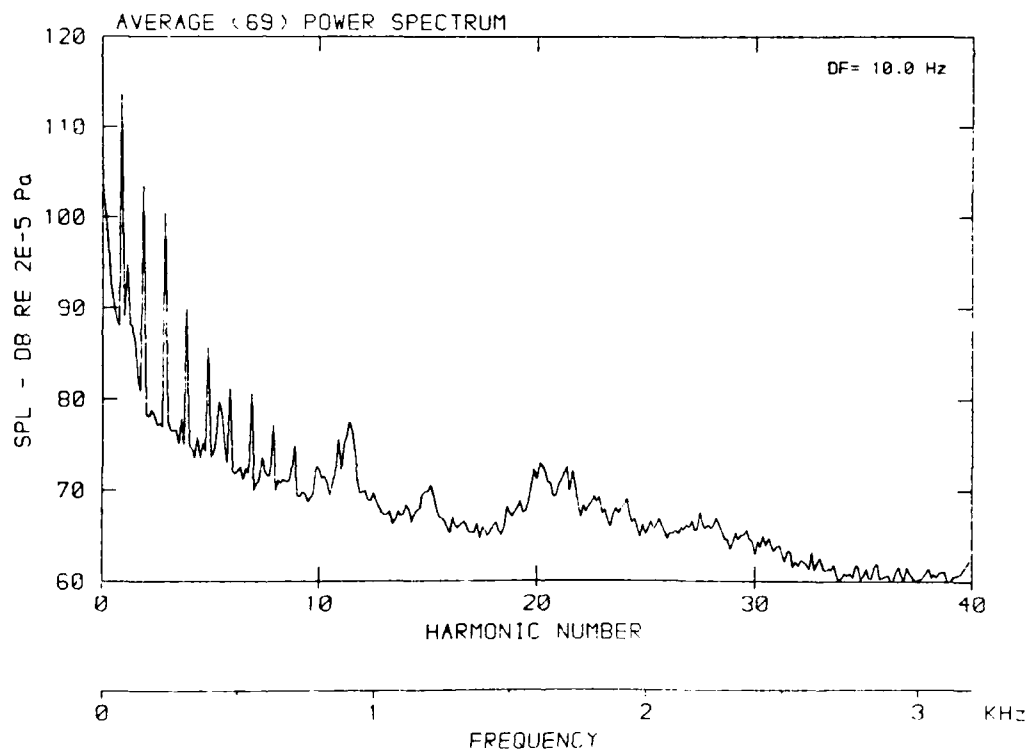
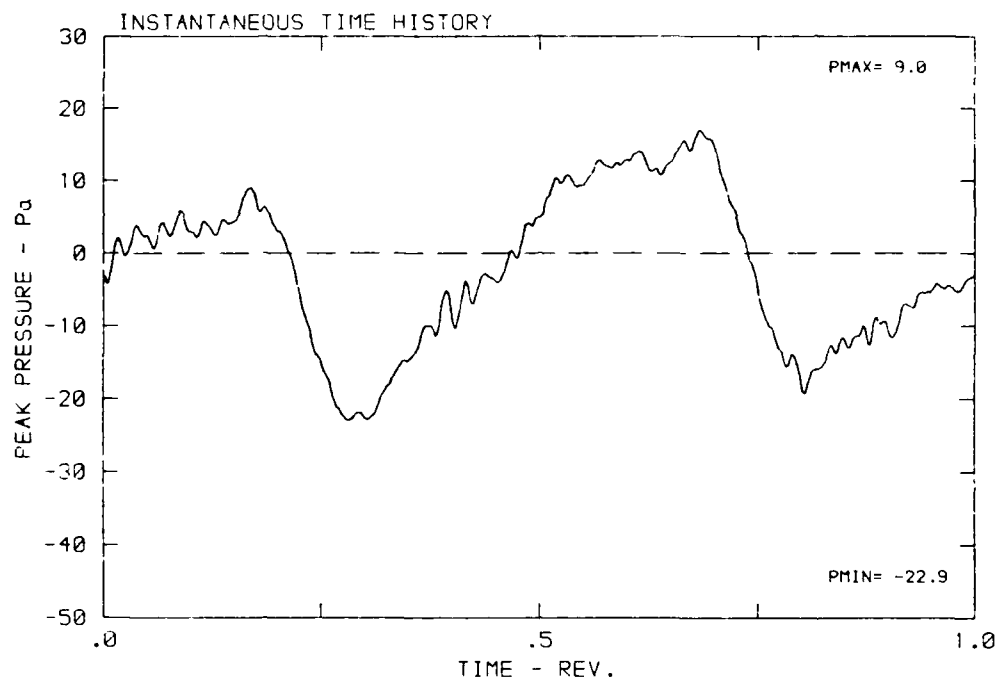
DATA POINT: FN-2 RUN: 167 MP: 6

β : 19.9° MH: .7655 n: 2400 rpm v/u : .202 ϕ : 3.6° T: 288.2 K



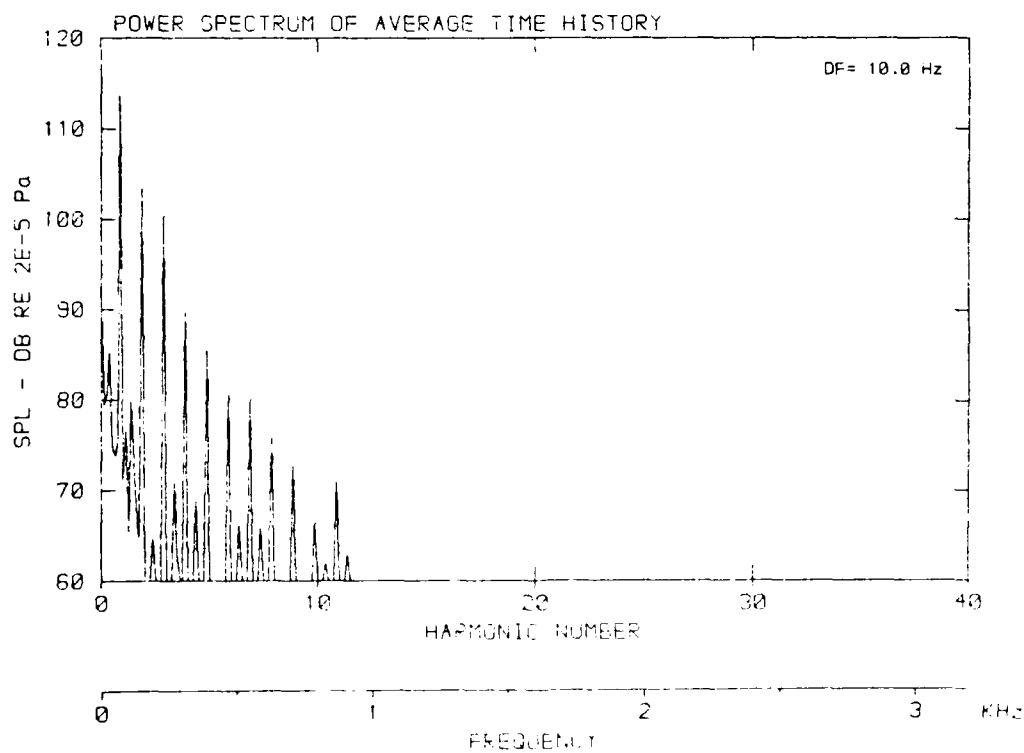
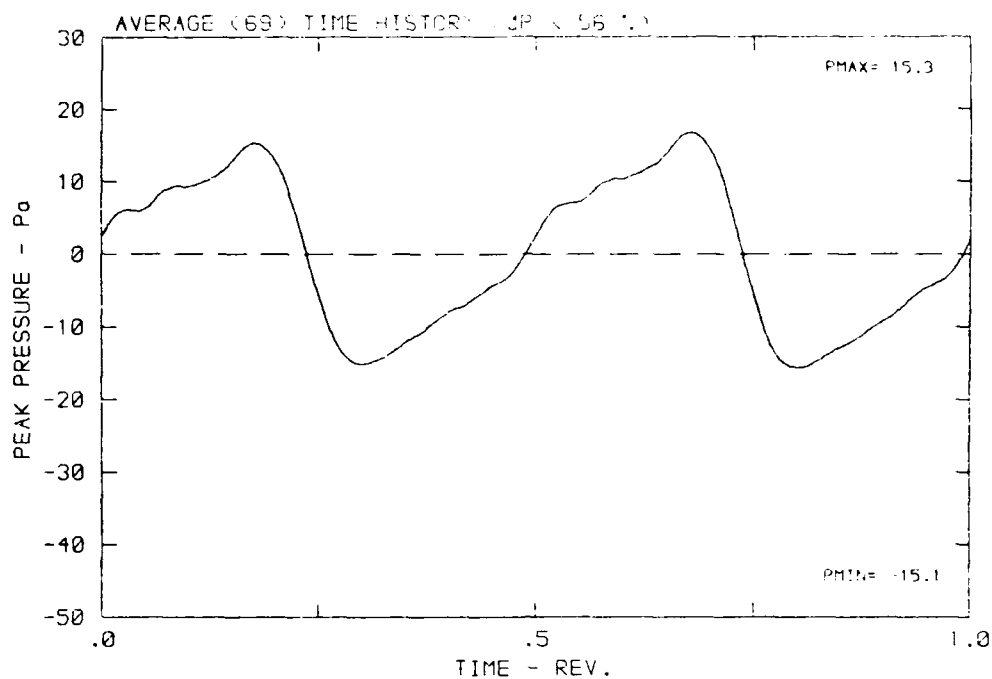
DATA POINT: FN-2 RUN: 167 MP: 7

β : 19.9° MH: .7655 n: 2400 rpm v-u: .202 ϕ : 3.6° T: 168.2



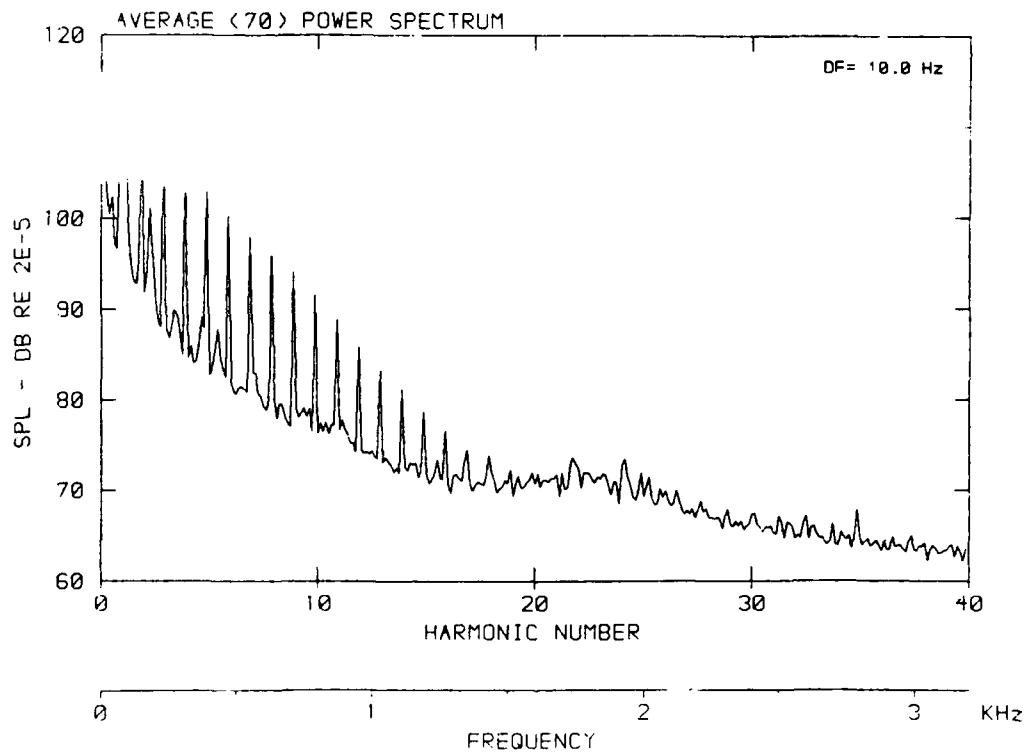
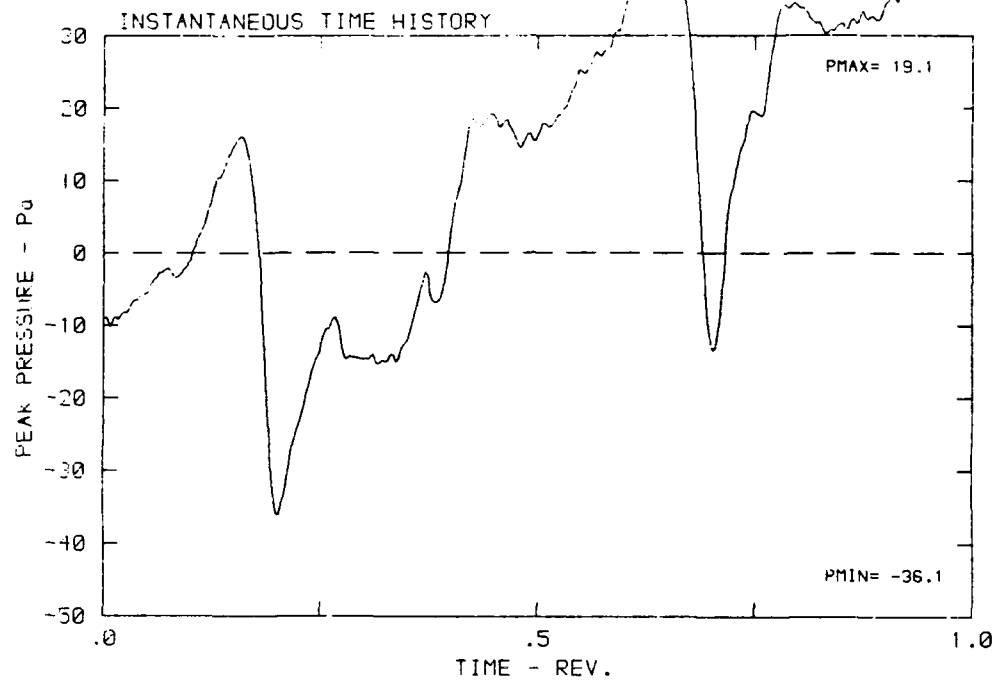
DATA POINT: FN-2 FLN: 167 MP: 7

β : 19.9° MH: .7655 n: 2400 rpm ν : .202 ϕ : 3.6° T : 268.2 K



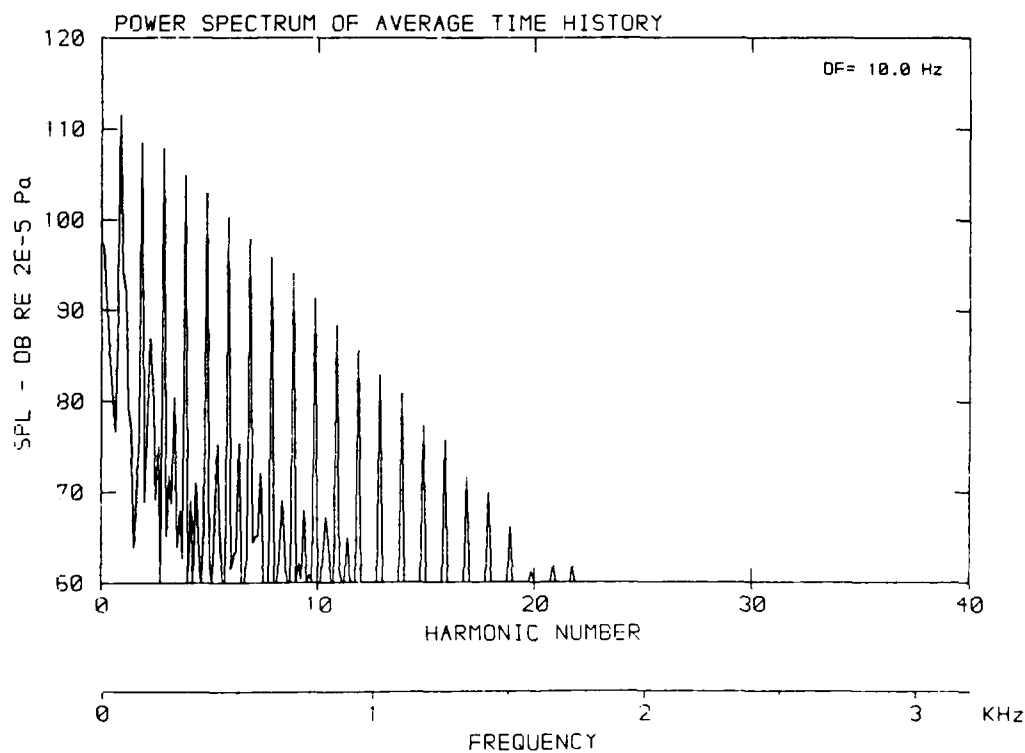
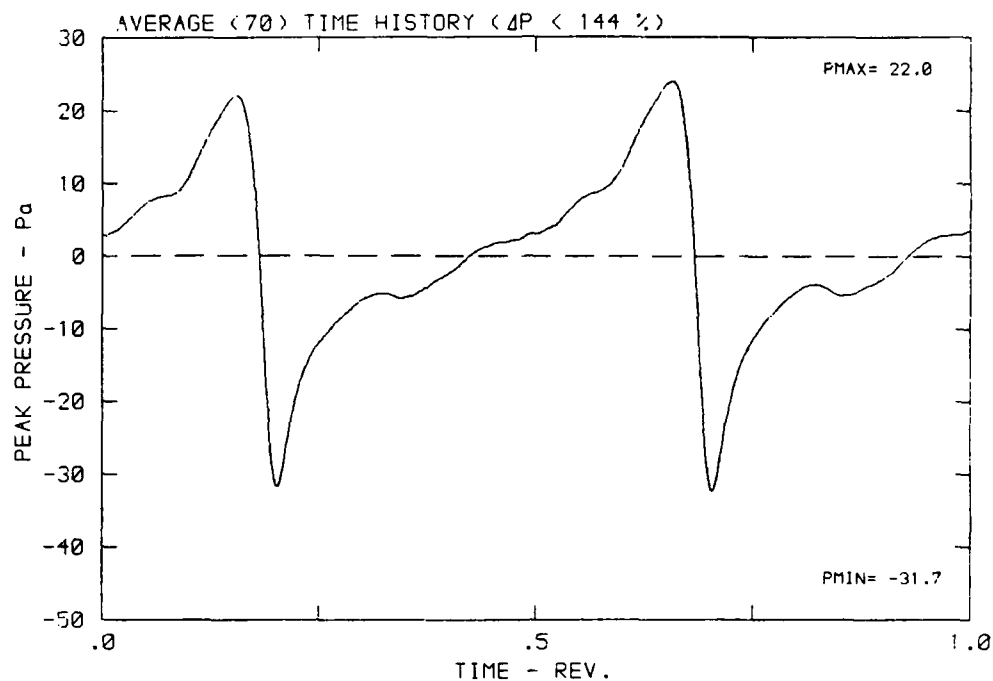
DATA POINT: FN-2 RUN: 167 MP: 8

β : 19.9° MH: .7655 n: 2400 rpm v/u : .202 ϕ : 3.6° T: 288.2 K



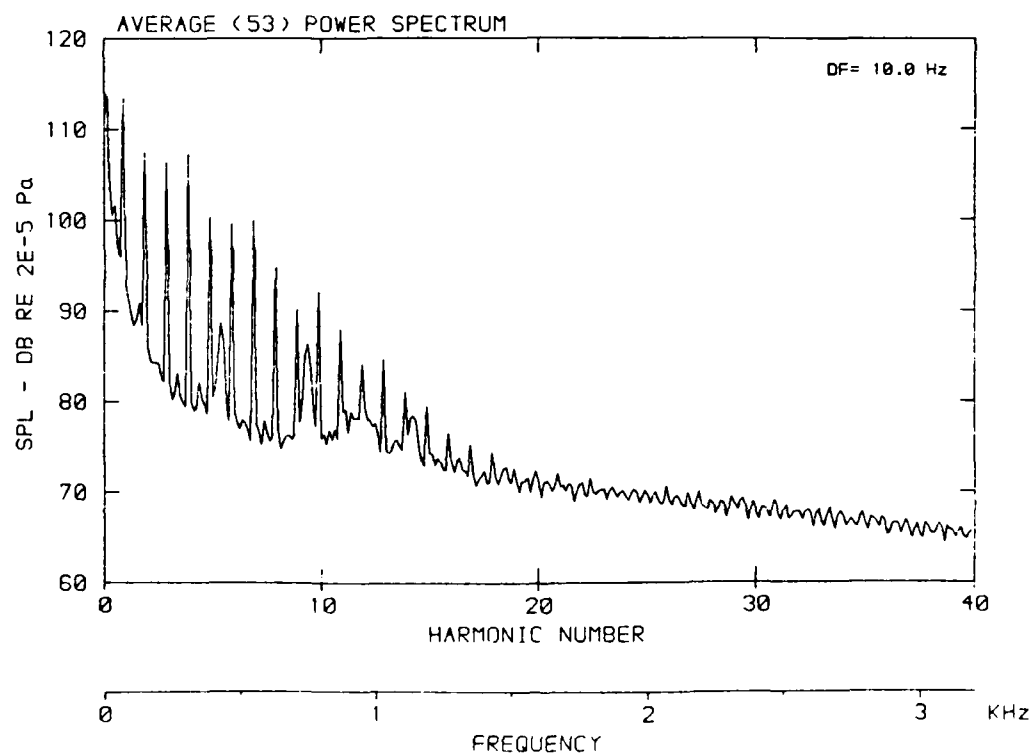
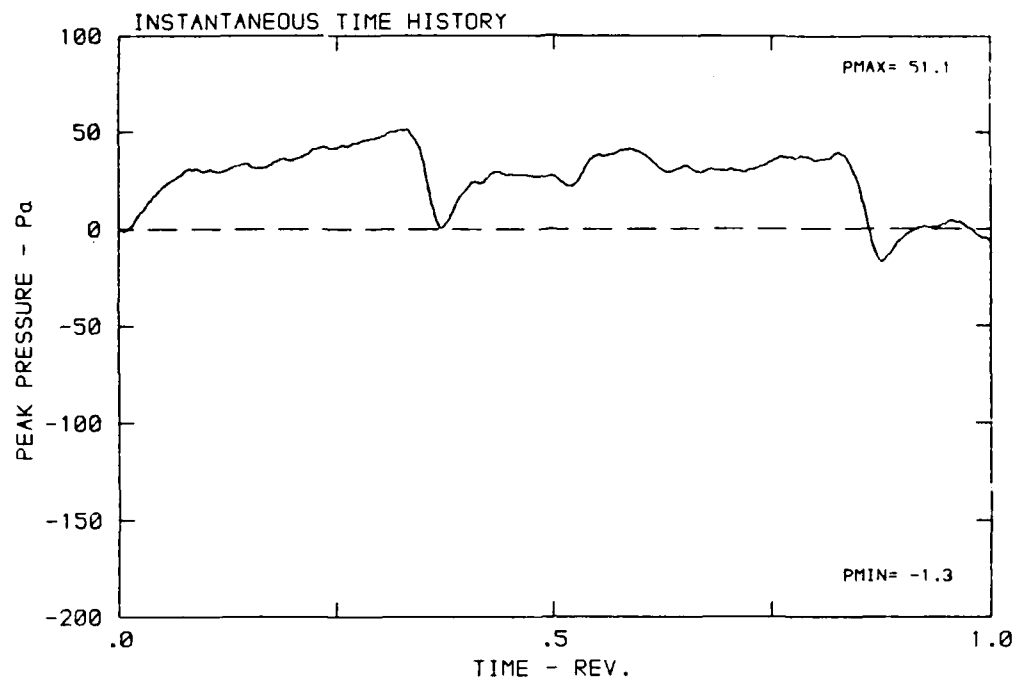
DATA POINT: FN-2 RUN: 167 MP: 8

β : 19.9° MH: .7655 n: 2400 rpm v/u: .202 ϕ : 3.6° T: 288.2 K



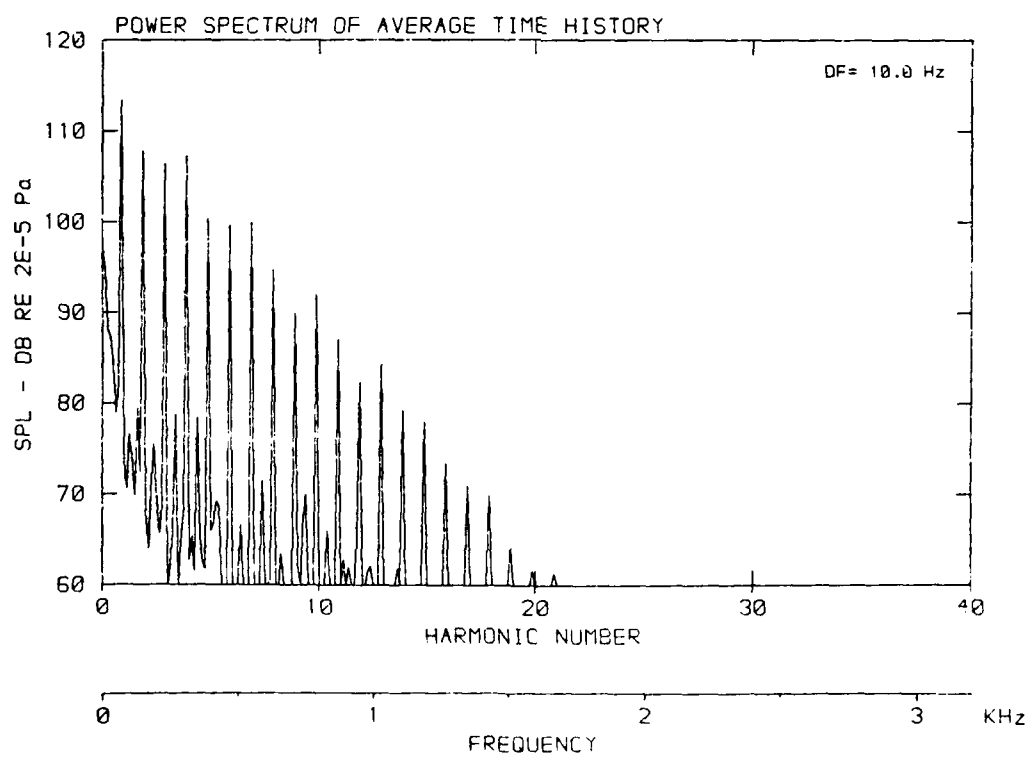
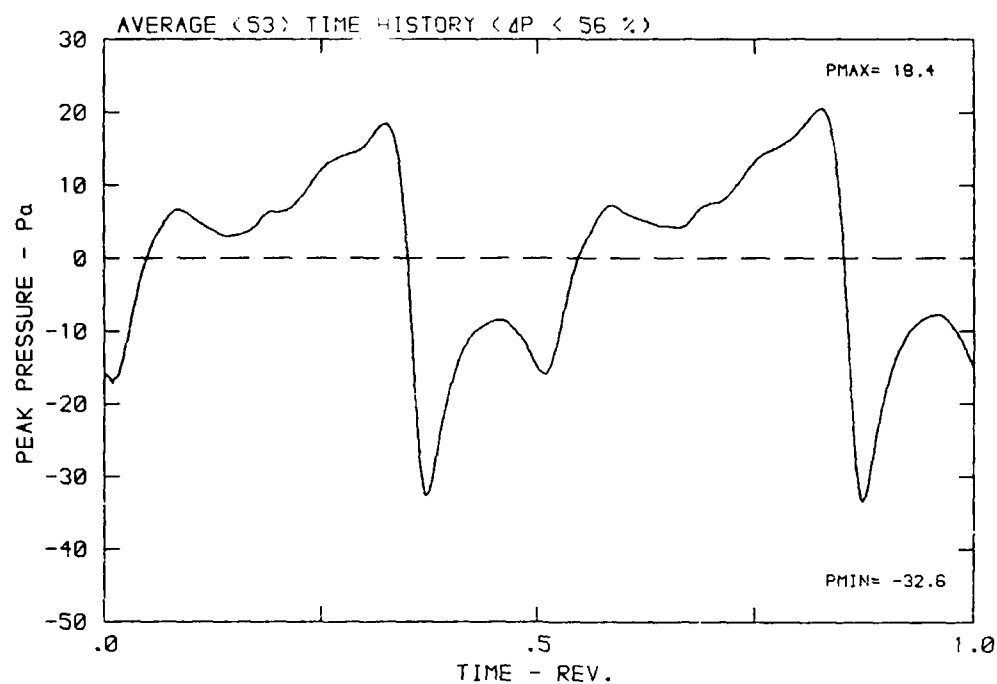
DATA POINT: FN-2 RUN: 167 MP: 9

β : 19.9° MH: .7655 n: 2400 rpm v/u : .202 ϕ : 3.6° T: 288.2 K



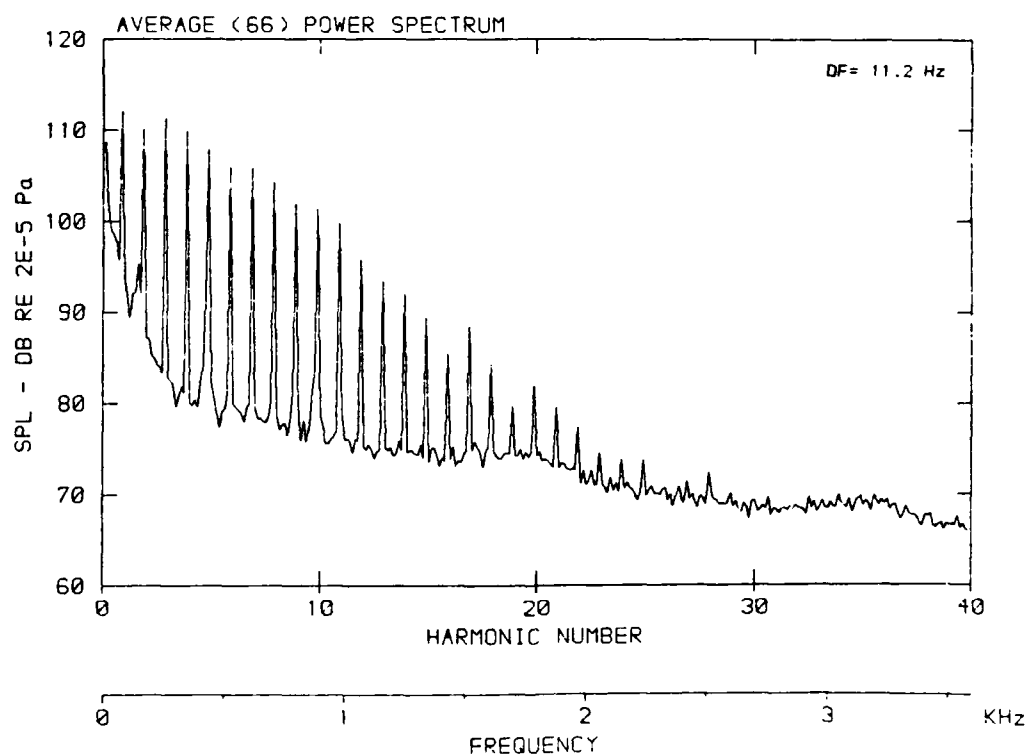
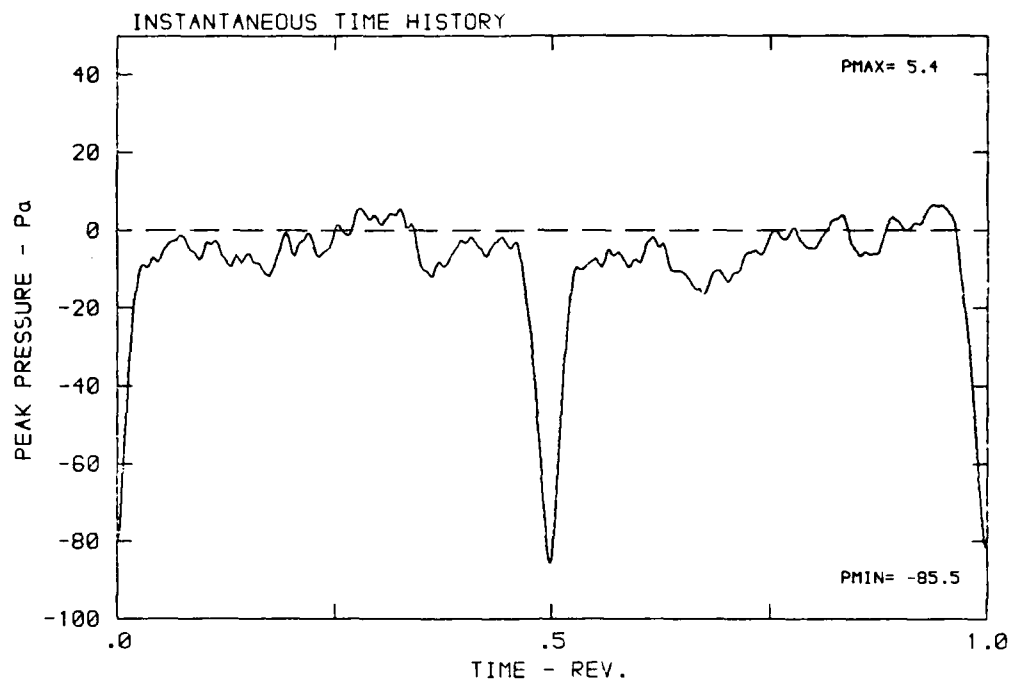
DATA POINT: FN-2 RUN: 167 MP: 9

β : 19.9° MH: .7655 n: 2400 rpm v/u : .202 ϕ : 3.6° T: 288.2 K



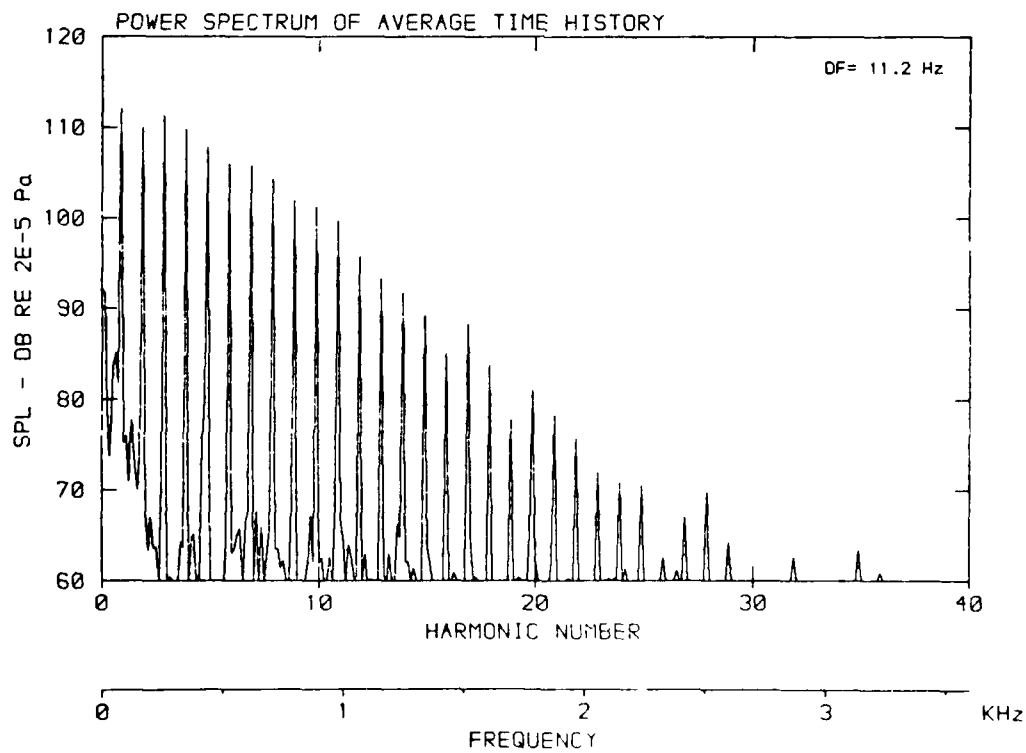
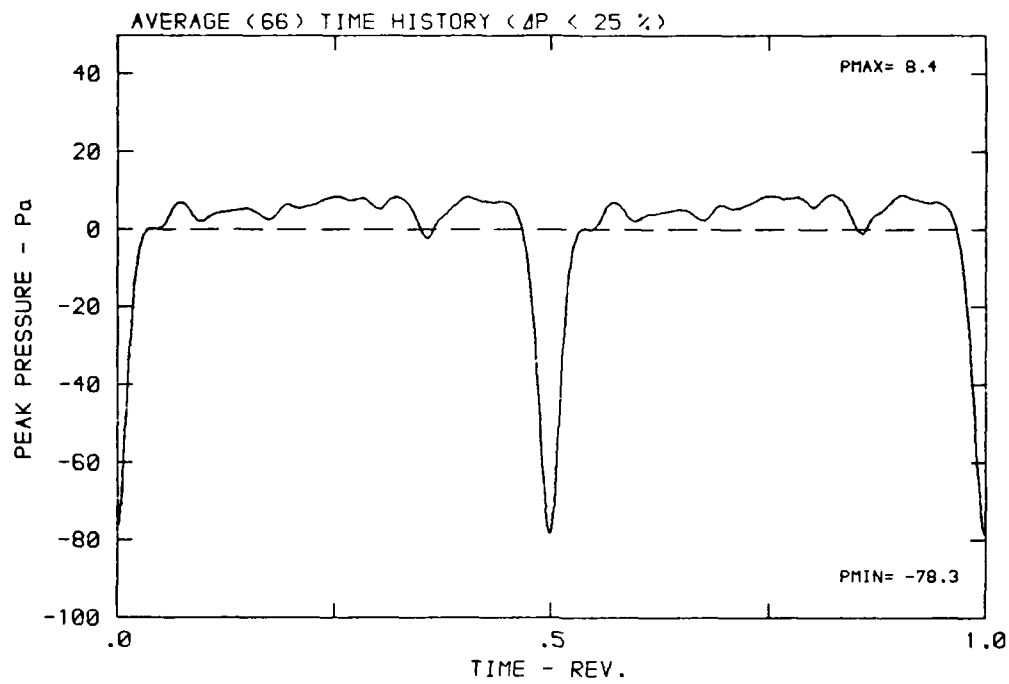
DATA POINT: FN-3 RUN: 168 MP: 1

β : 19.9° MH: .8740 n: 2700 rpm v/u: .269 ϕ : 3.6° T: 288.2 K



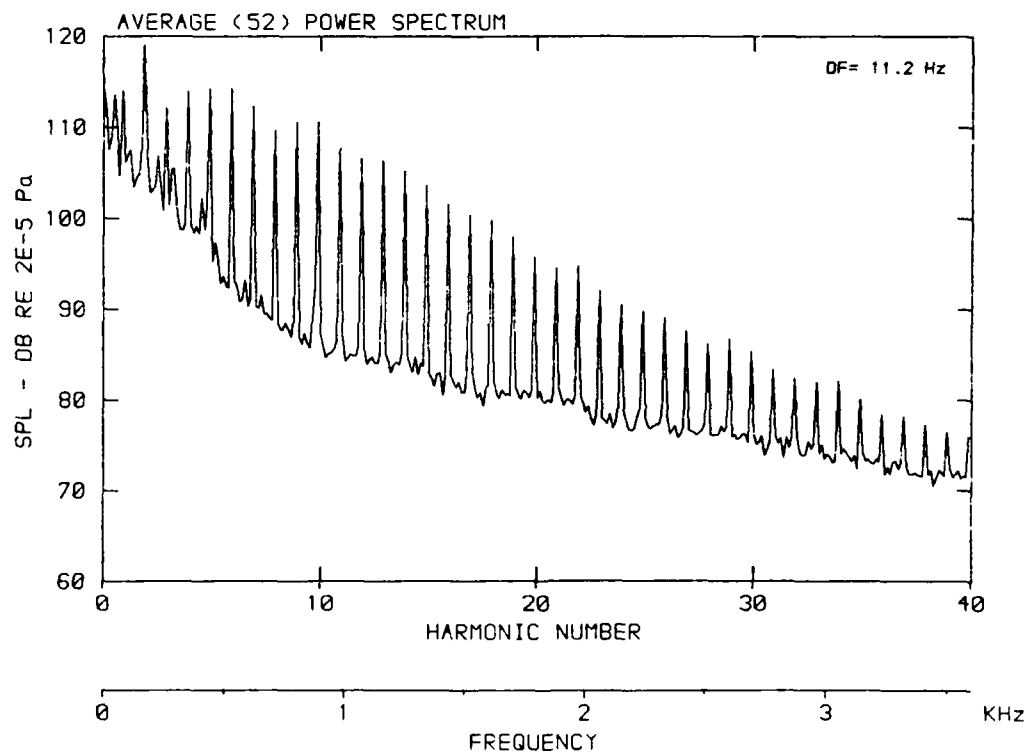
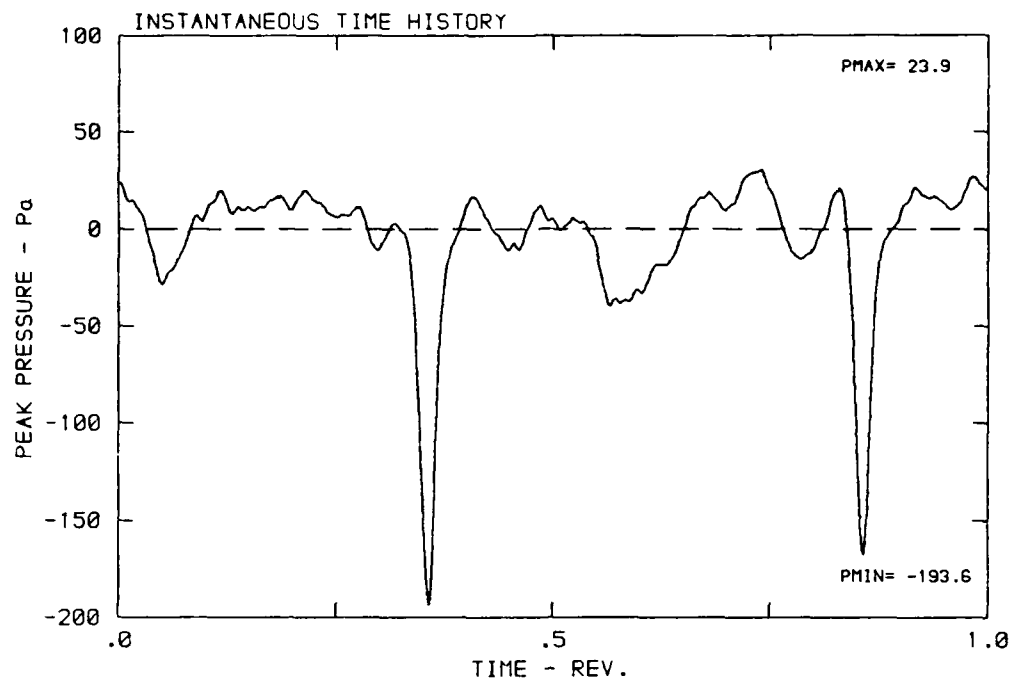
DATA POINT: FN-3 RUN: 168 MP: 1

β : 19.9° MH: .8740 n: 2700 rpm v/u : .269 ϕ : 3.6° T: 288.2 K



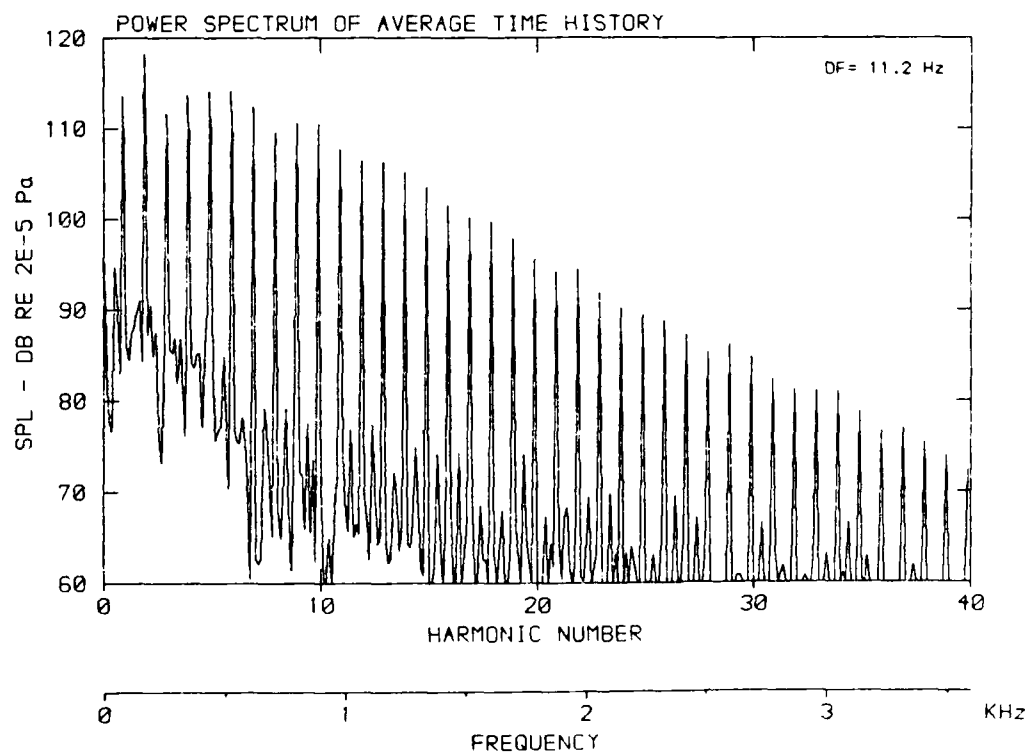
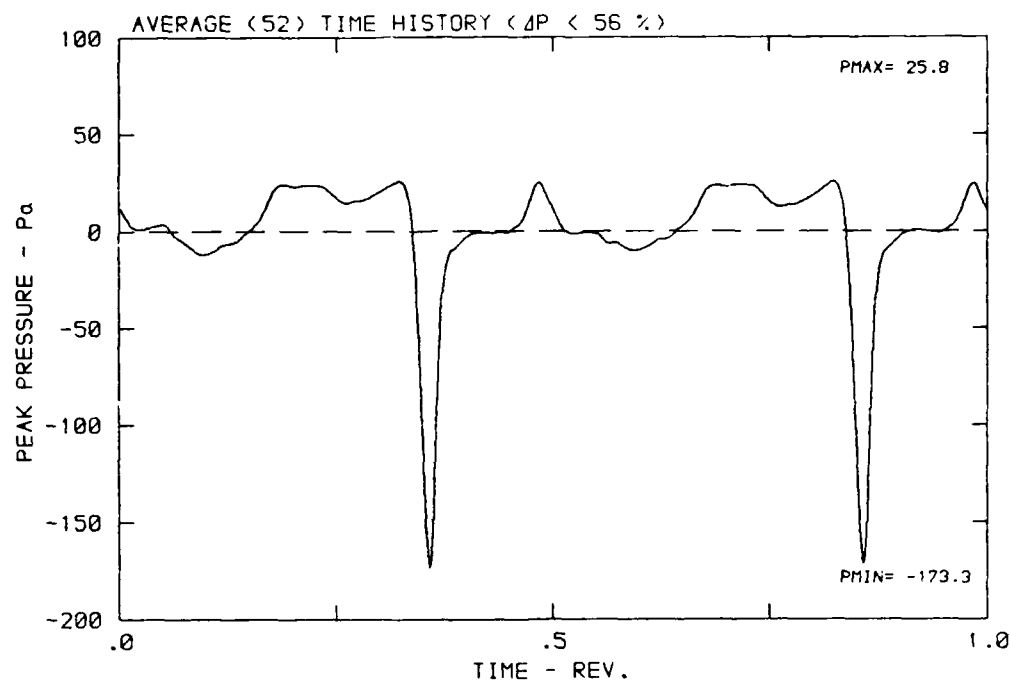
DATA POINT: FN-3 RUN: 168 MP: 2

β : 19.9° MH: .8740 n: 2700 rpm v/u : .269 ϕ : 3.6° T: 288.2 K



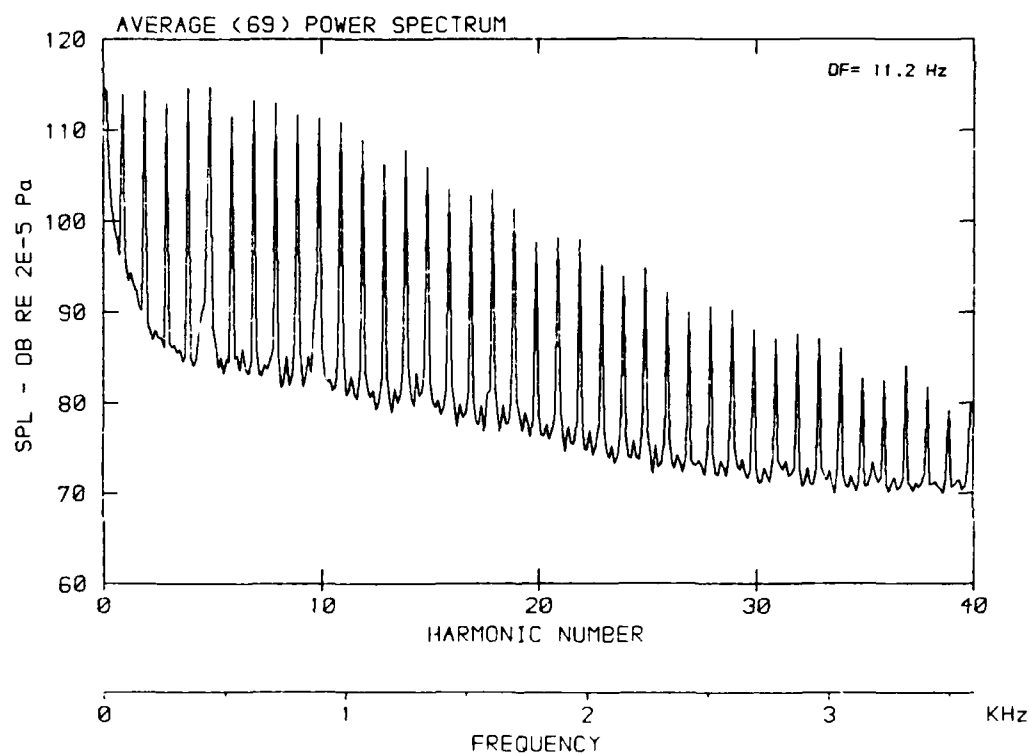
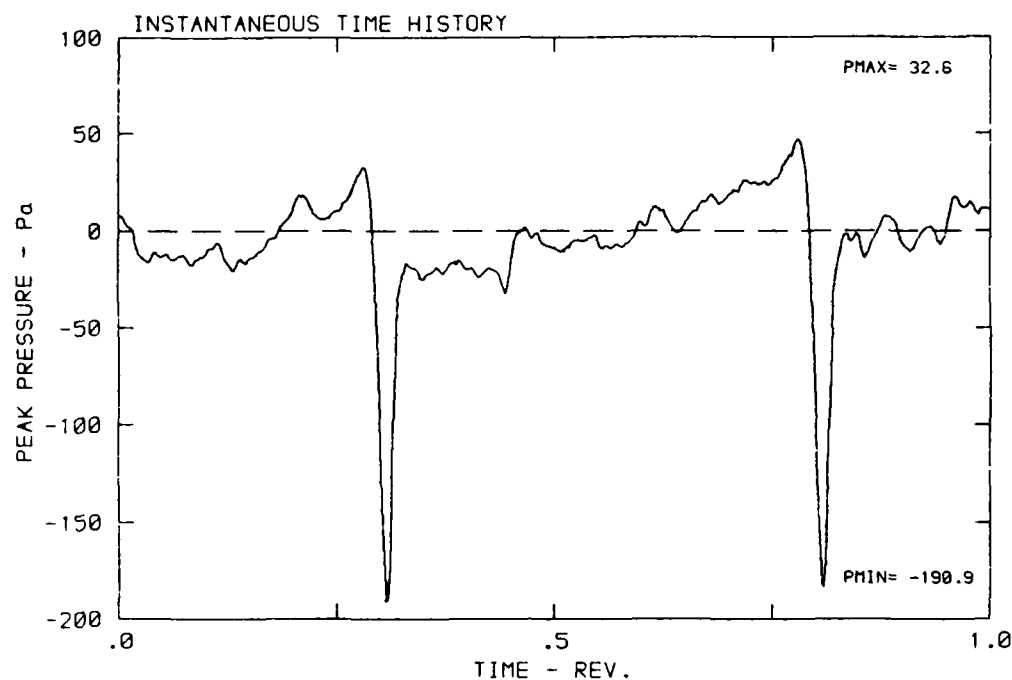
DATA POINT: FN-3 RUN: 168 MP: 2

β : 19.9° MH: .8740 n: 2700 rpm v/u: .269 ϕ : 3.6° T: 288.2 K



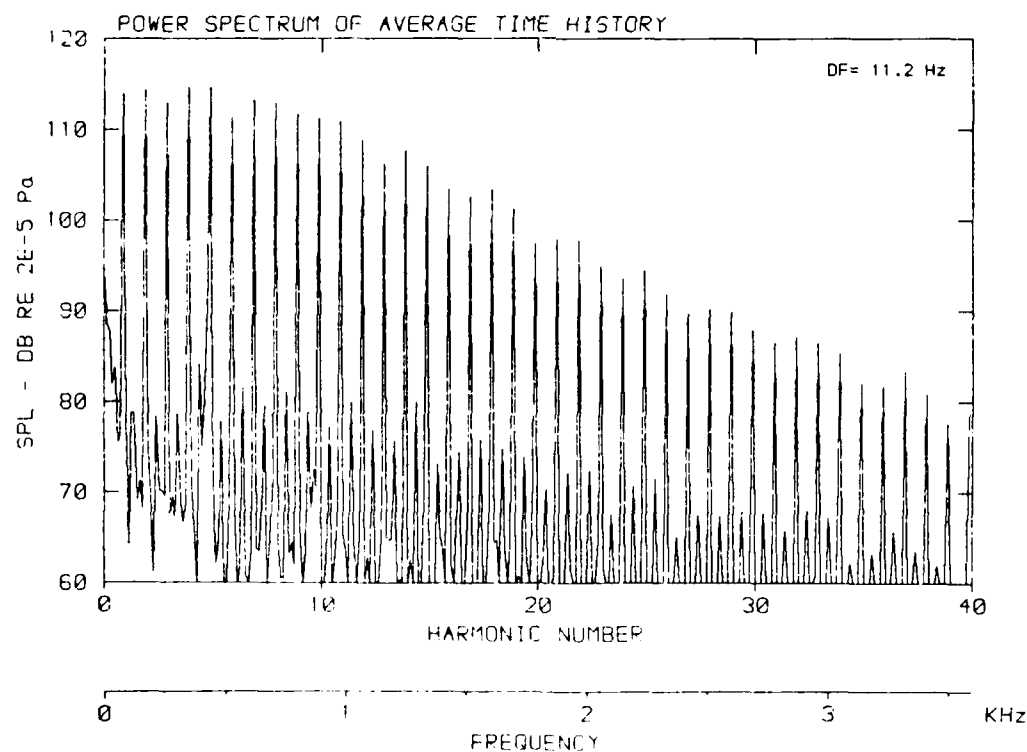
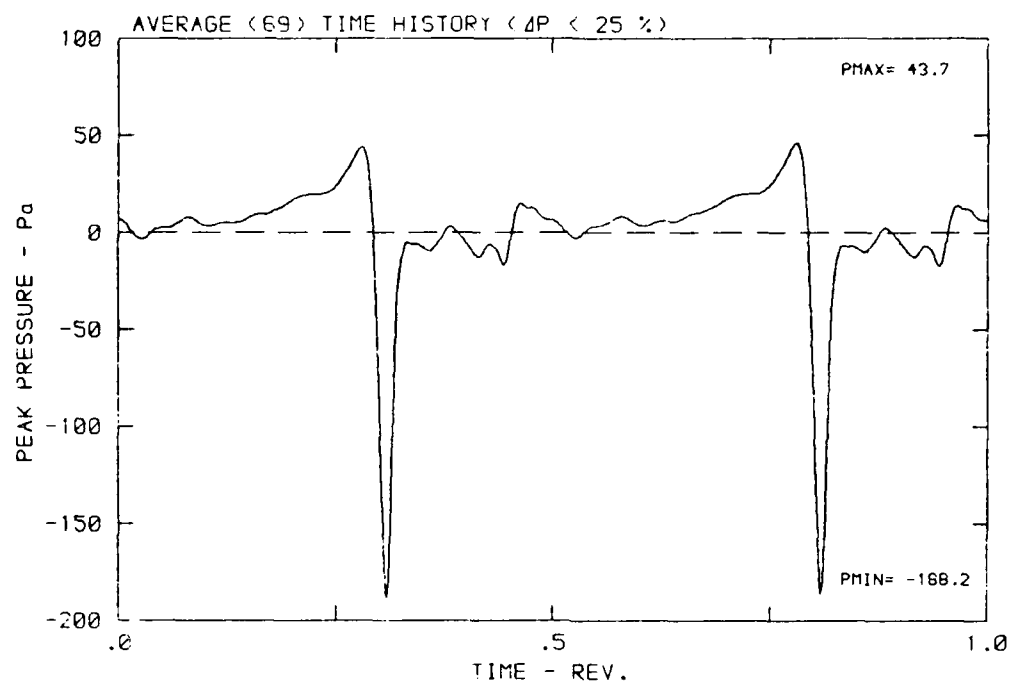
DATA POINT: FN-3 RUN: 168 MP: 3

β : 19.9° MH: .8740 n: 2700 rpm v/u : .269 ϕ : 3.6° T: 288.2 K



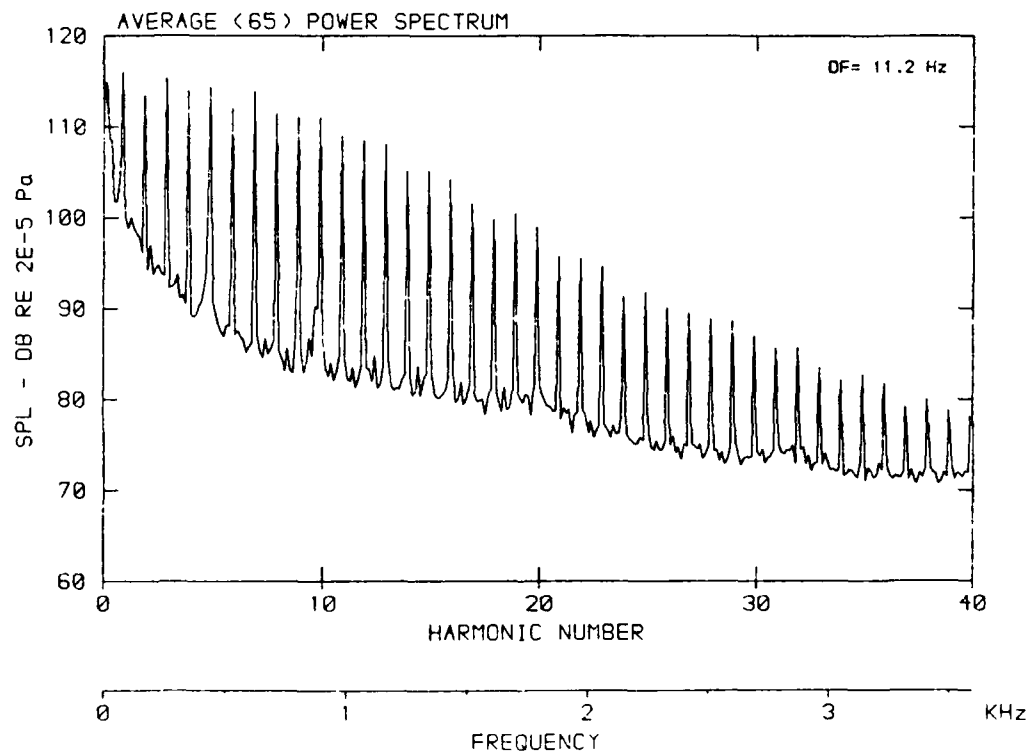
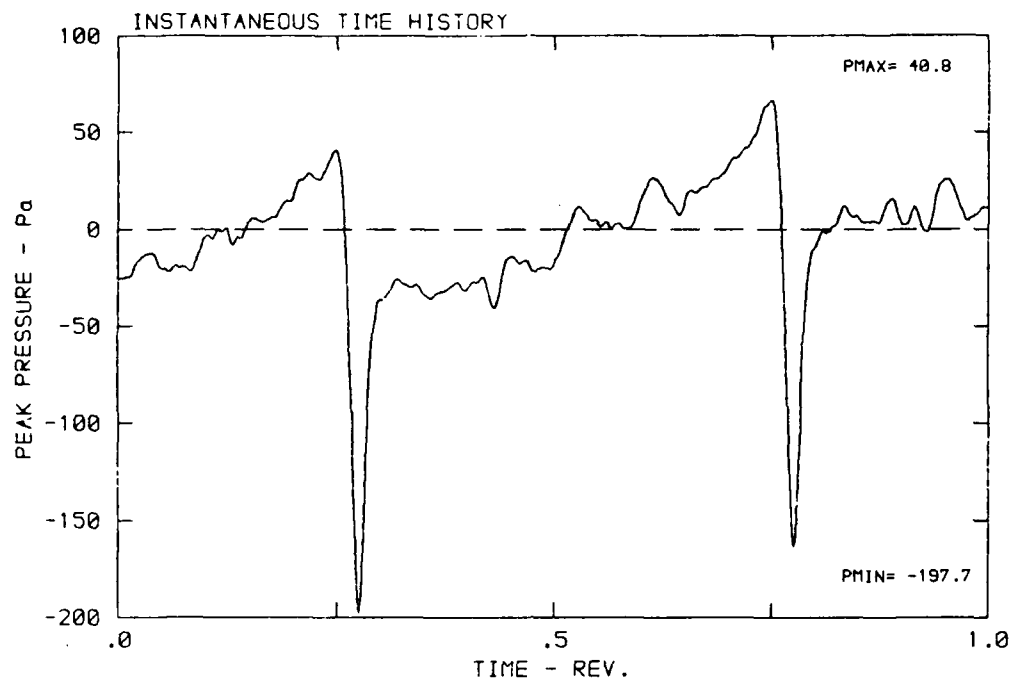
DATA POINT: FN-3 RUN: 168 MP: 3

β : 19.9° MH: .8740 n: 2700 rpm v/u: .269 ϕ : 3.6° T: 288.2 K



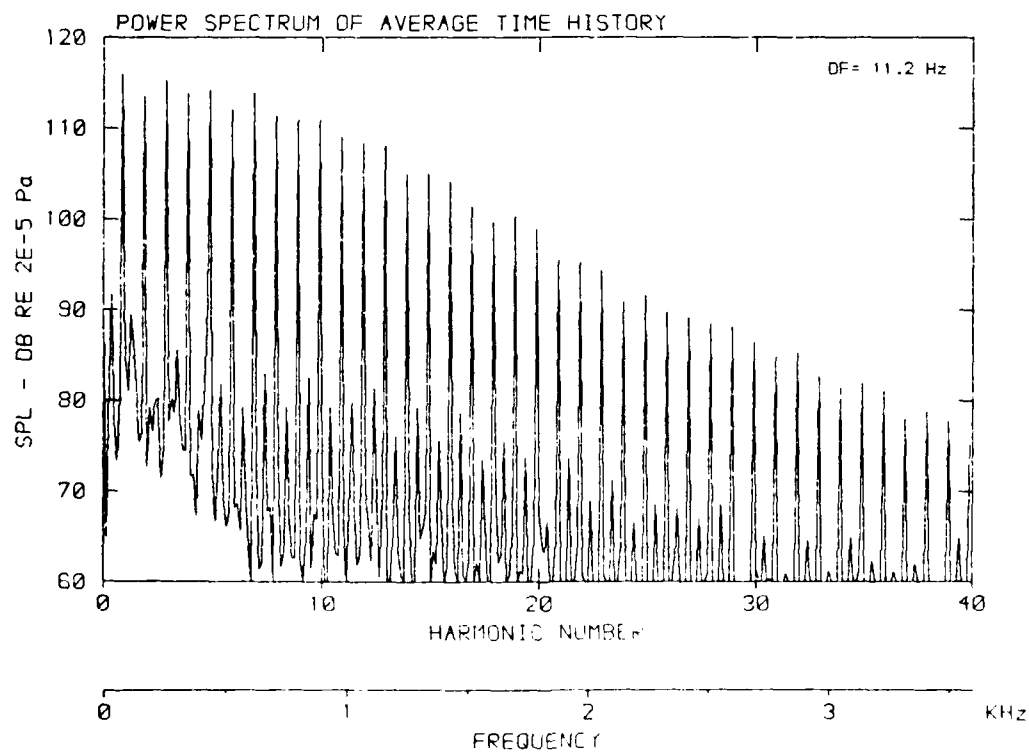
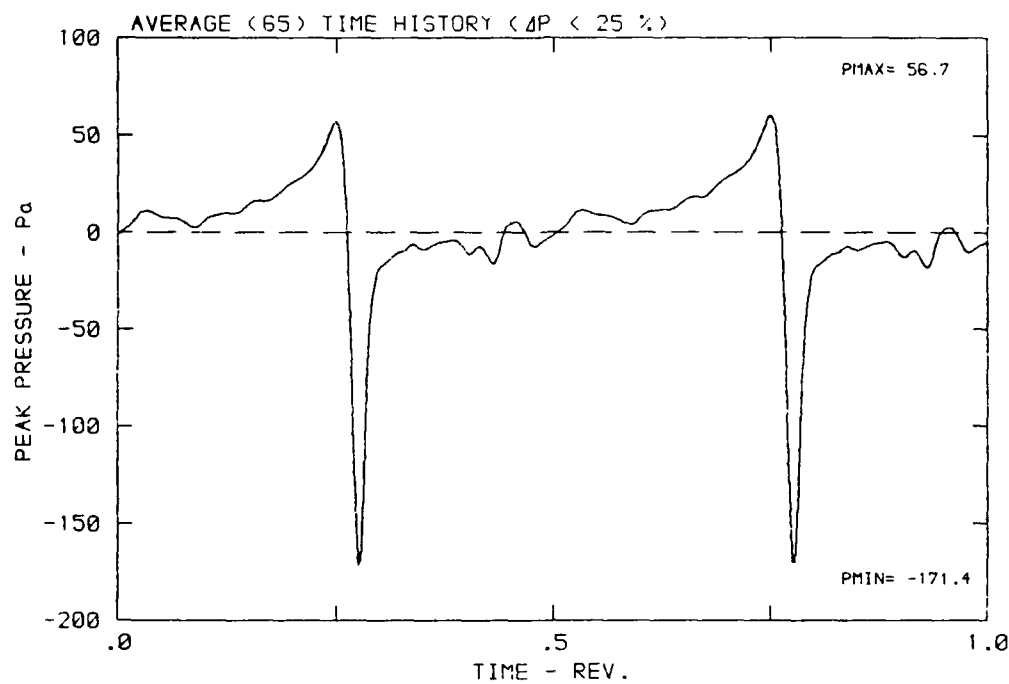
DATA POINT: FN-3 RUN: 168 MP: 4

β : 19.9° MH: .8740 n: 2700 rpm v/u: .269 ϕ : 3.6° T: 288.2 K



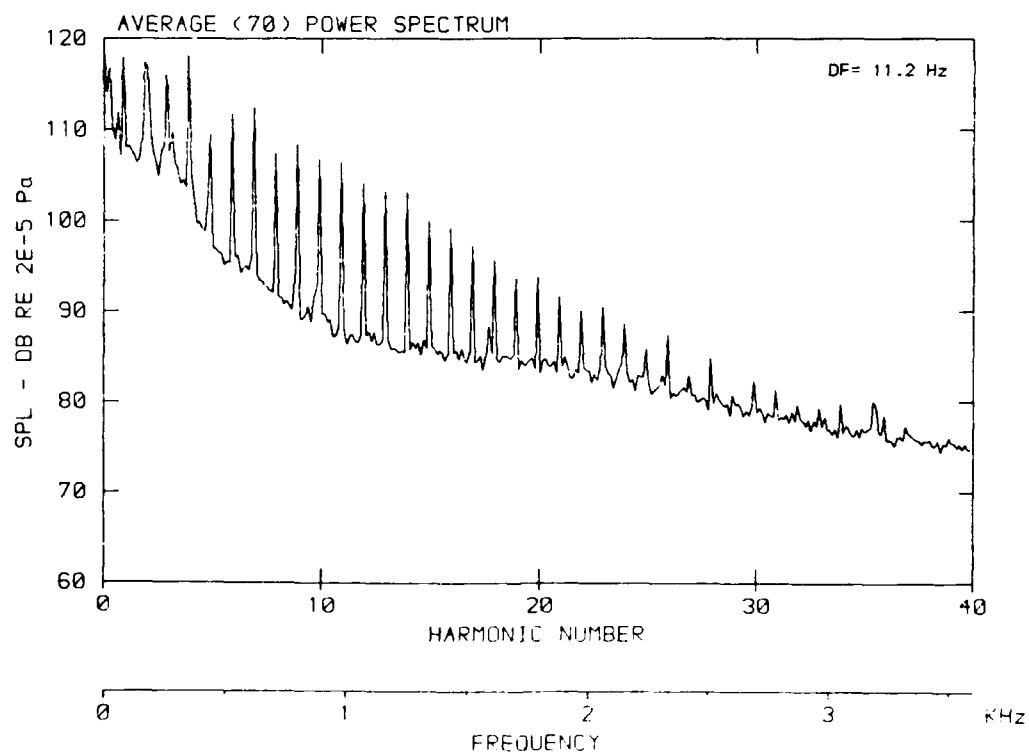
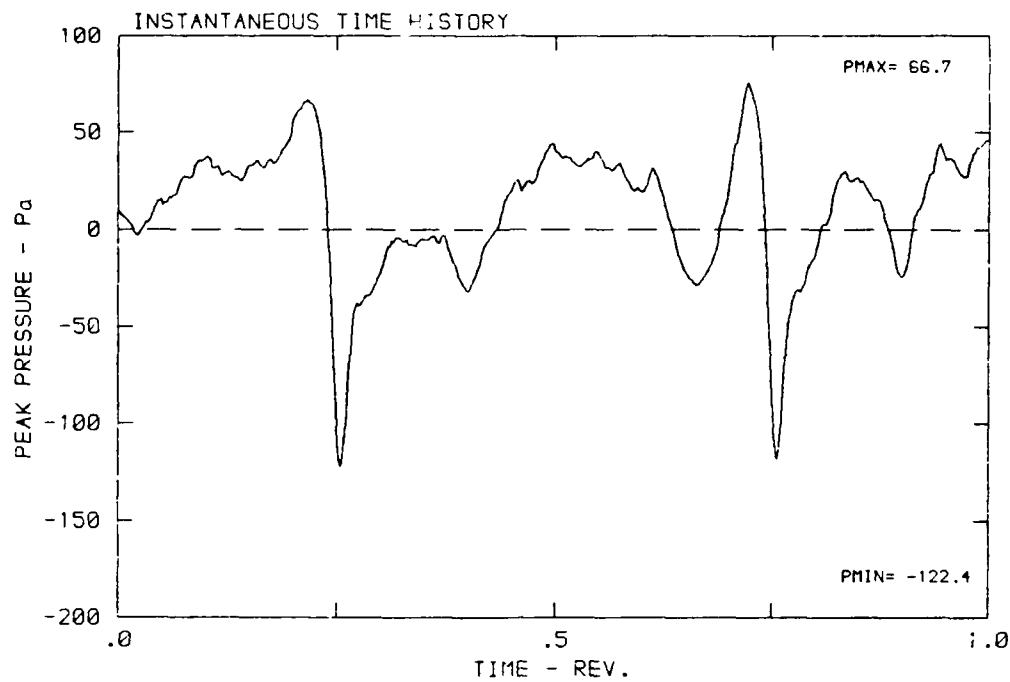
DATA POINT: FN-3 RUN: 168 MP: 4

β : 19.9° MH: .8740 n: 2700 rpm v/u : .269 ϕ : 3.6° T: 288.2 K



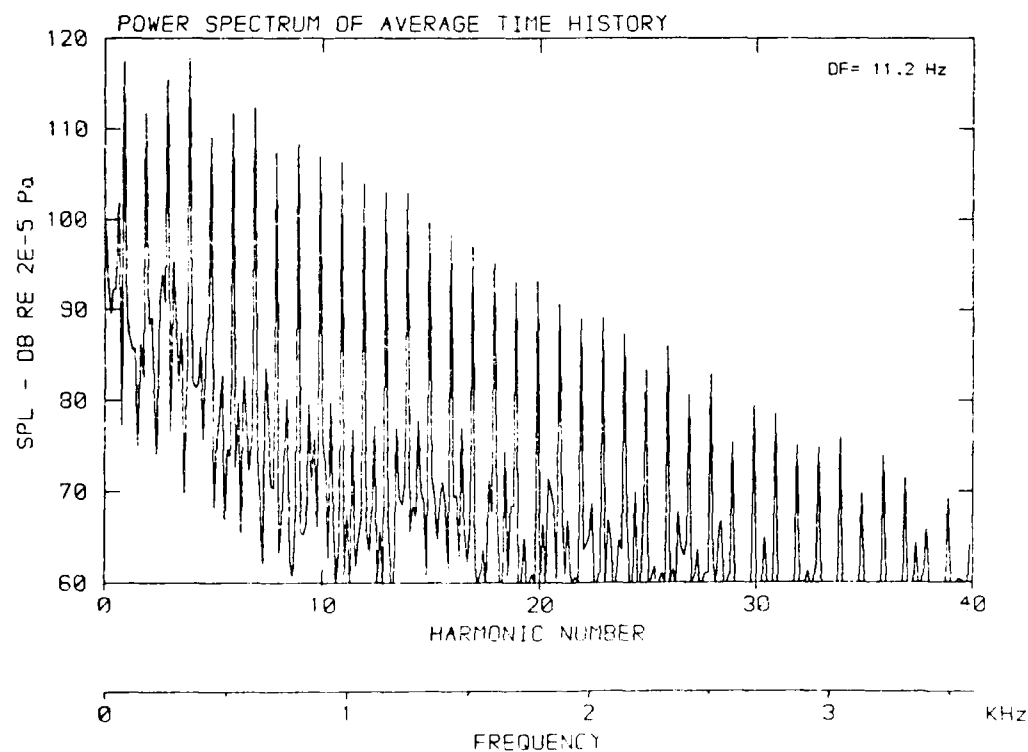
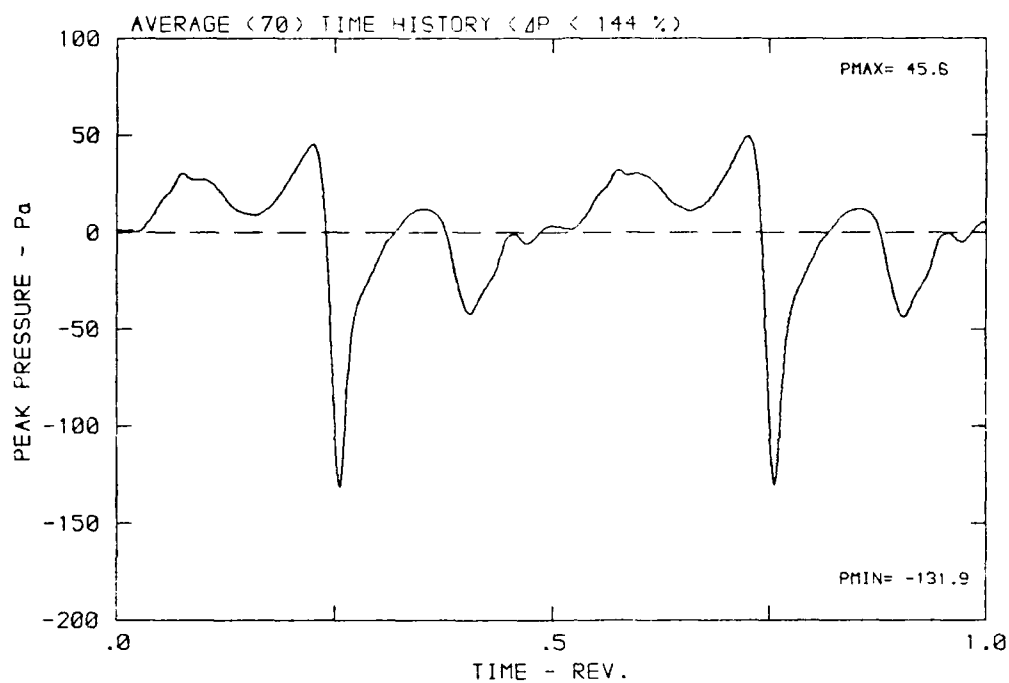
DATA POINT: FN-3 RUN: 168 MP: 5

β : 19.9° MH: .8740 n: 2700 rpm v/u : .269 ϕ : 3.6° T: 288.2 K



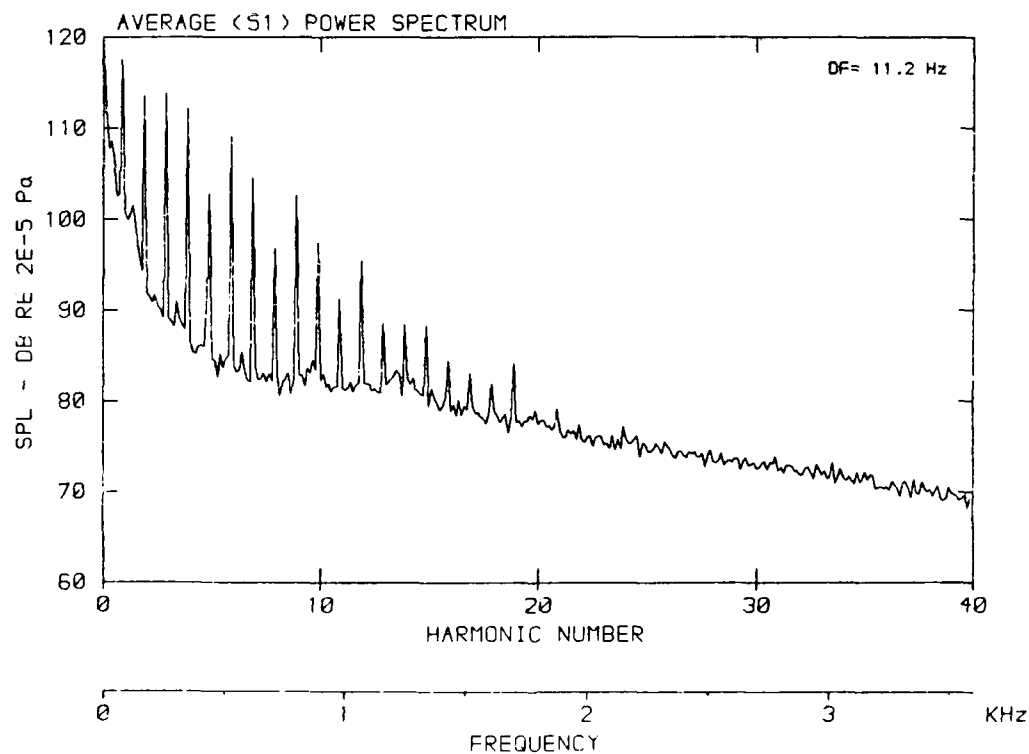
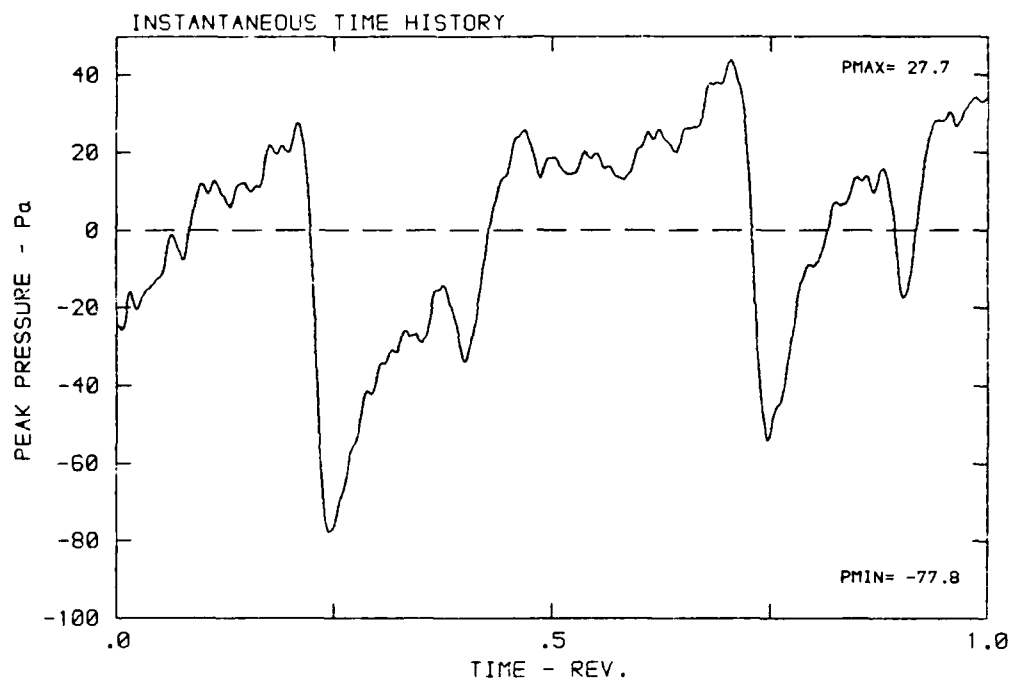
DATA POINT: FN-3 RUN: 168 MP: 5

β : 19.9° MH: .8740 n: 2700 rpm v/u: .269 ϕ : 3.6° T: 288.2 K



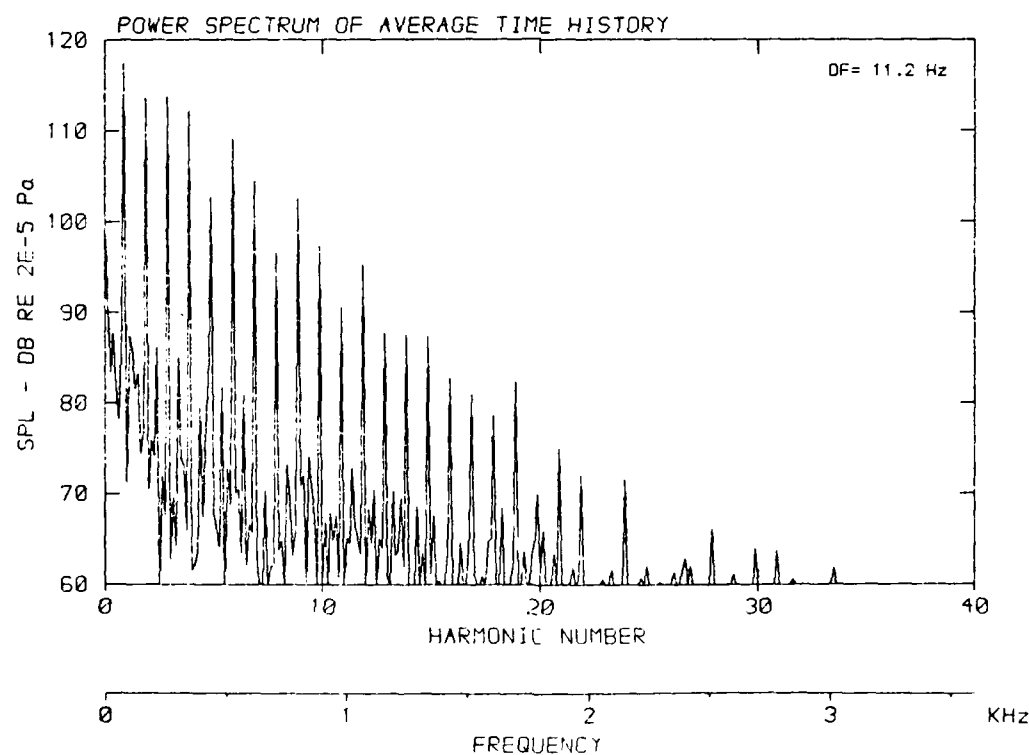
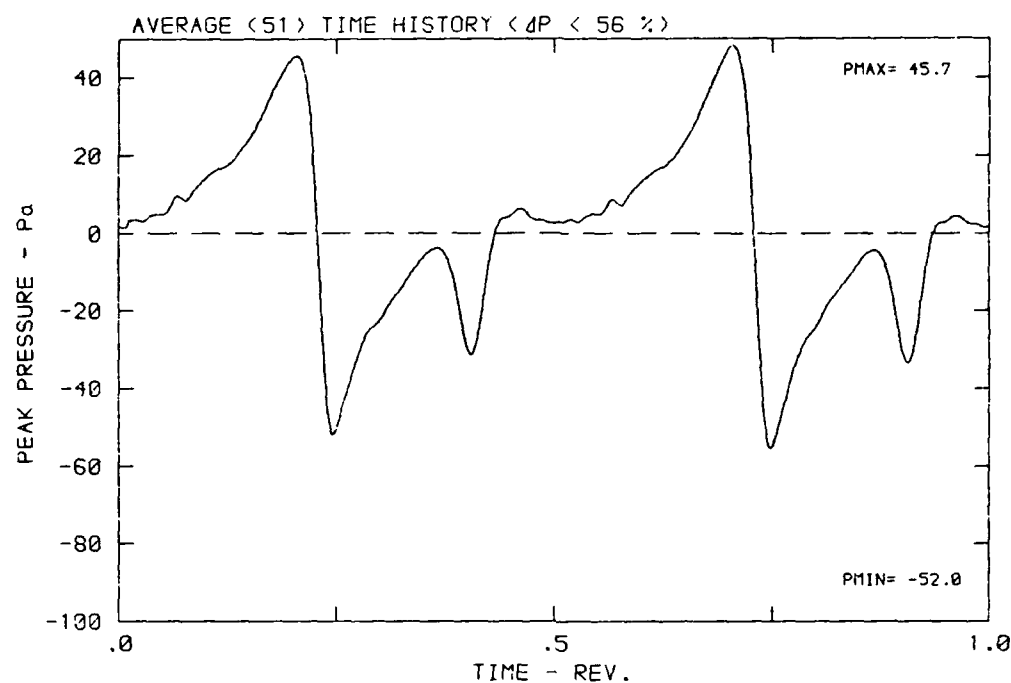
DATA POINT: FN-3 RUN: 168 MP: 6

β : 19.9° MH: .9740 n: 2700 rpm v/u : .269 ϕ : 3.6° T: 288.2 K



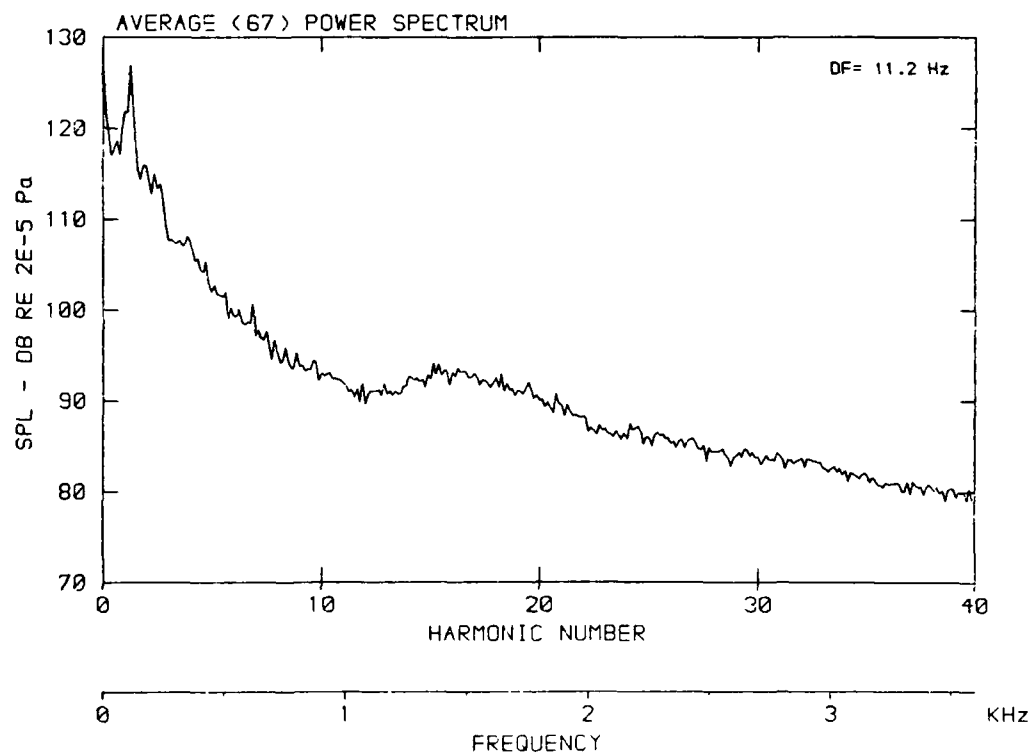
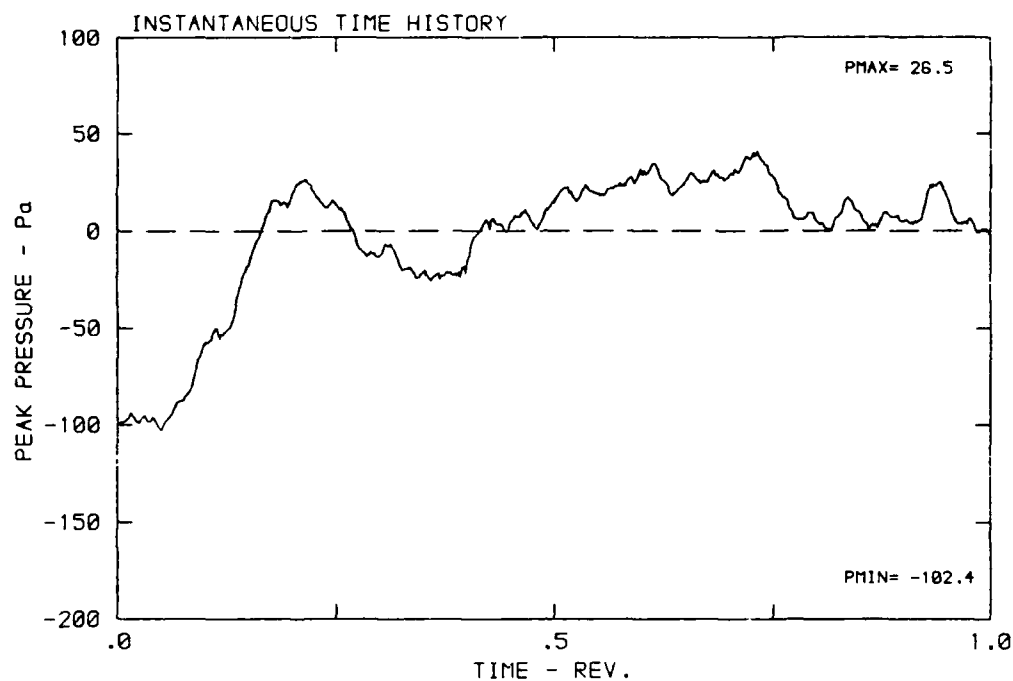
DATA POINT: FN-3 RUN: 168 MP: 6

β : 19.9° MH: .8740 n: 2700 rpm v/u: .269 ϕ : 3.6° T: 288.2 K



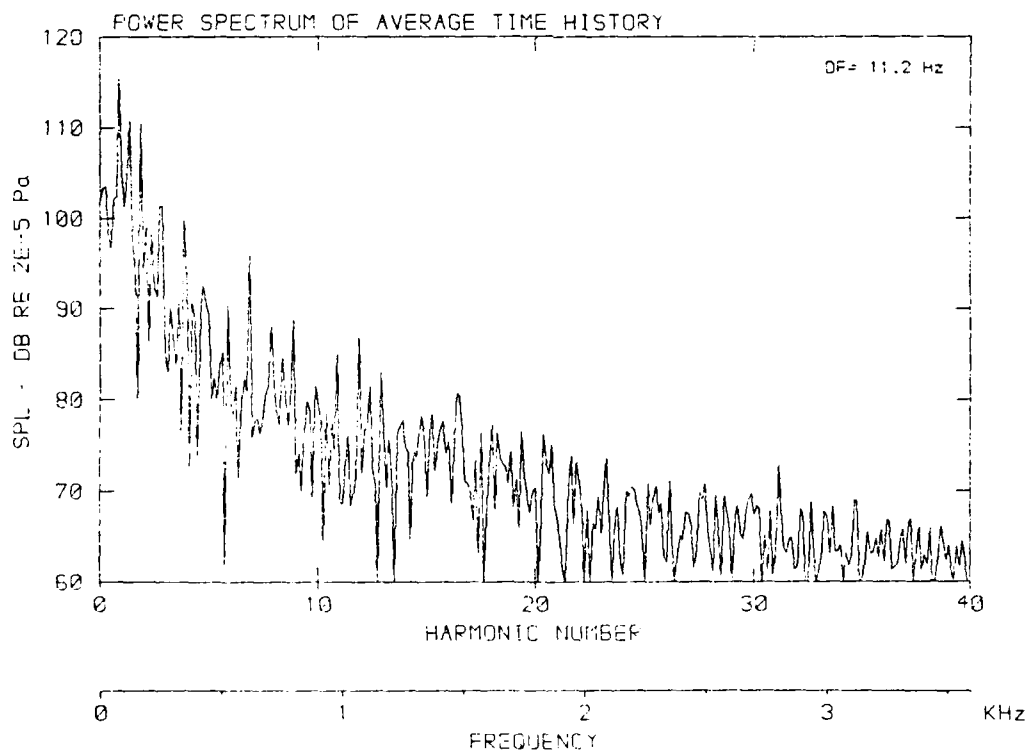
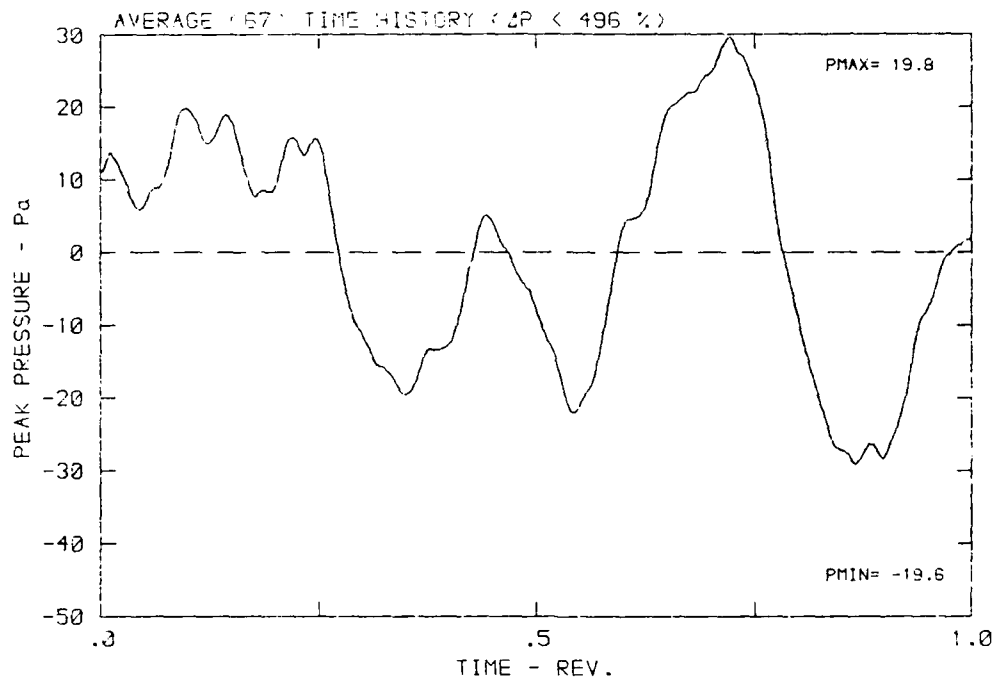
DATA POINT: FN-3 RUN: 168 MP: 7

β : 19.9° MH: .8740 n: 2700 rpm v/u: .269 ϕ : 3.6° T: 288.2 K



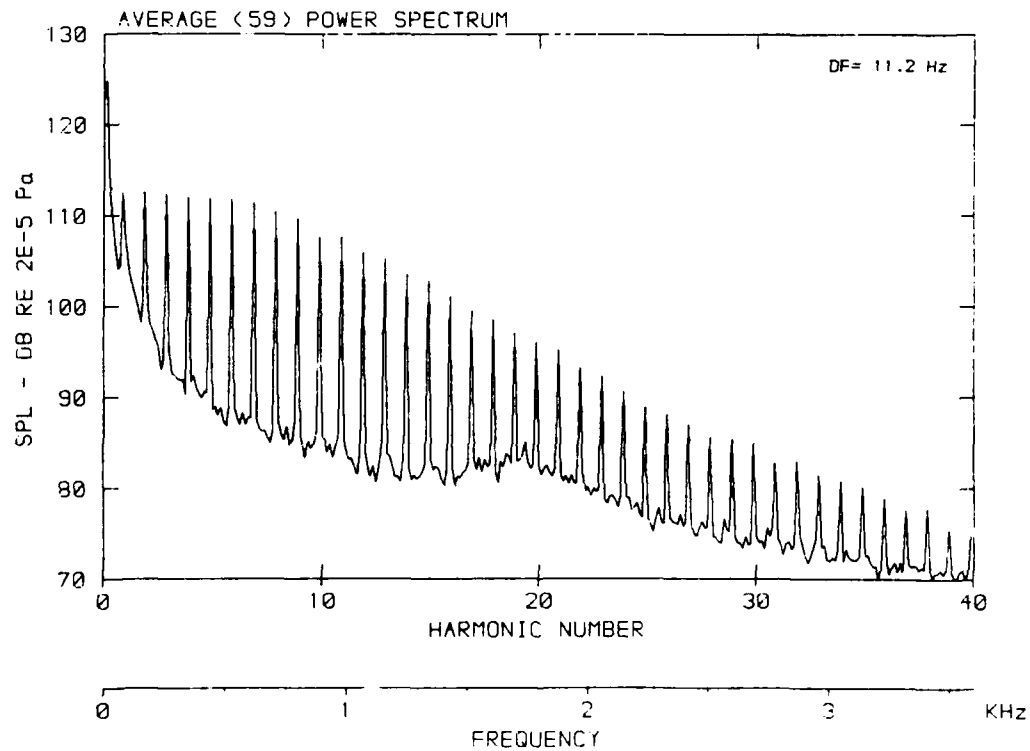
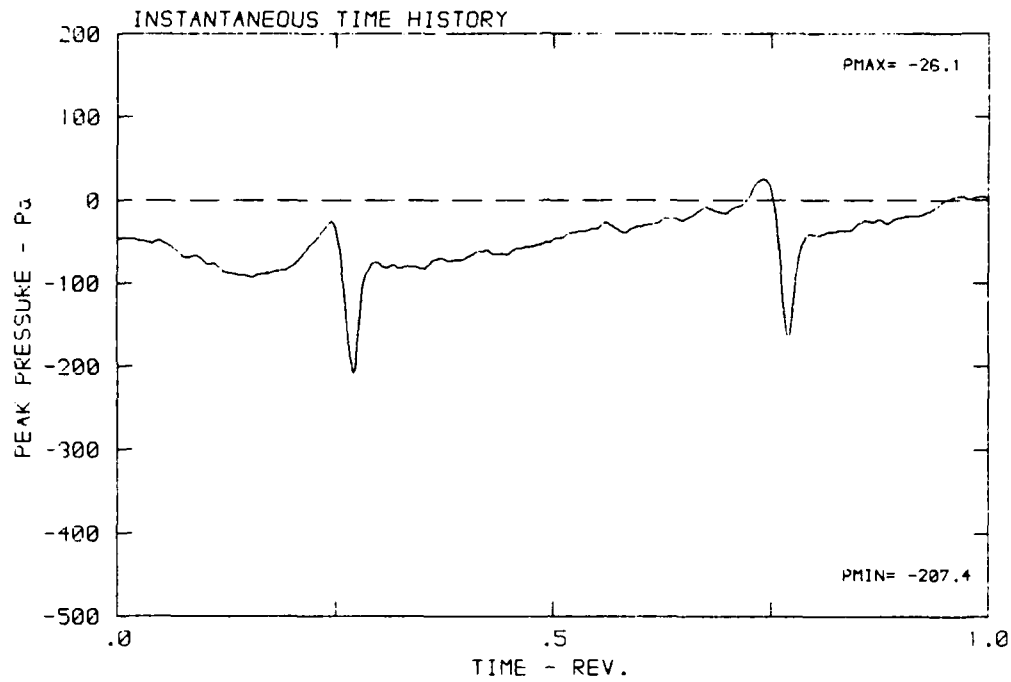
DATA POINT: FN-3 RUN: 168 MP: 7

β : 19.9° MH: .8740 n: 2700 rpm v/u: .269 ϕ : 3.6° T: 288.2 K



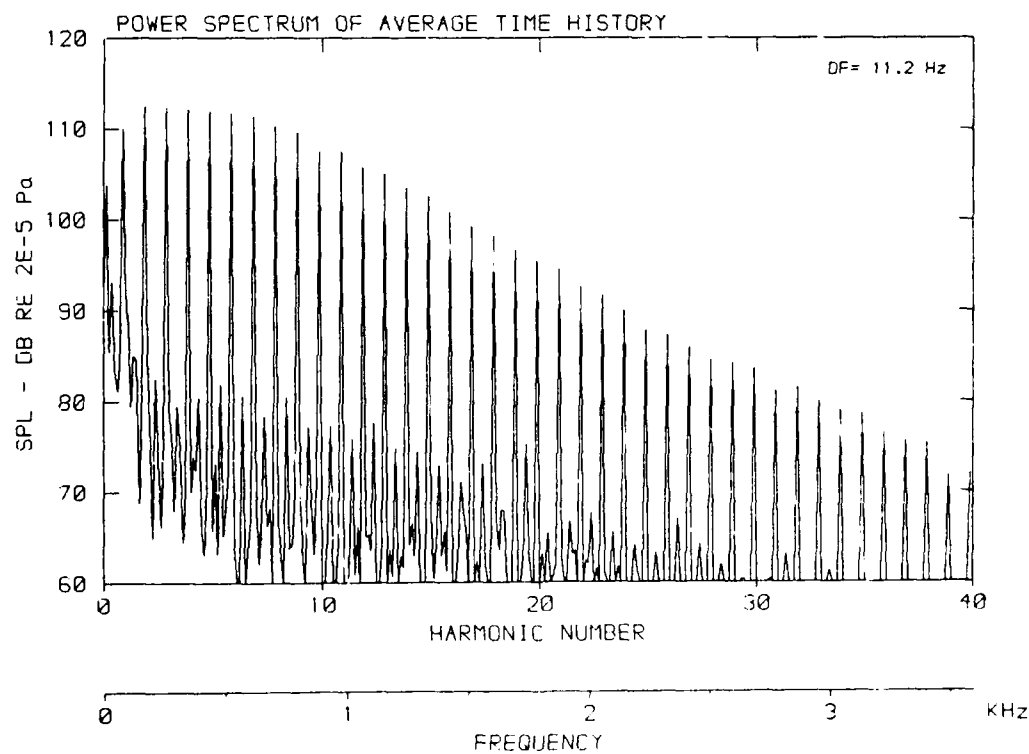
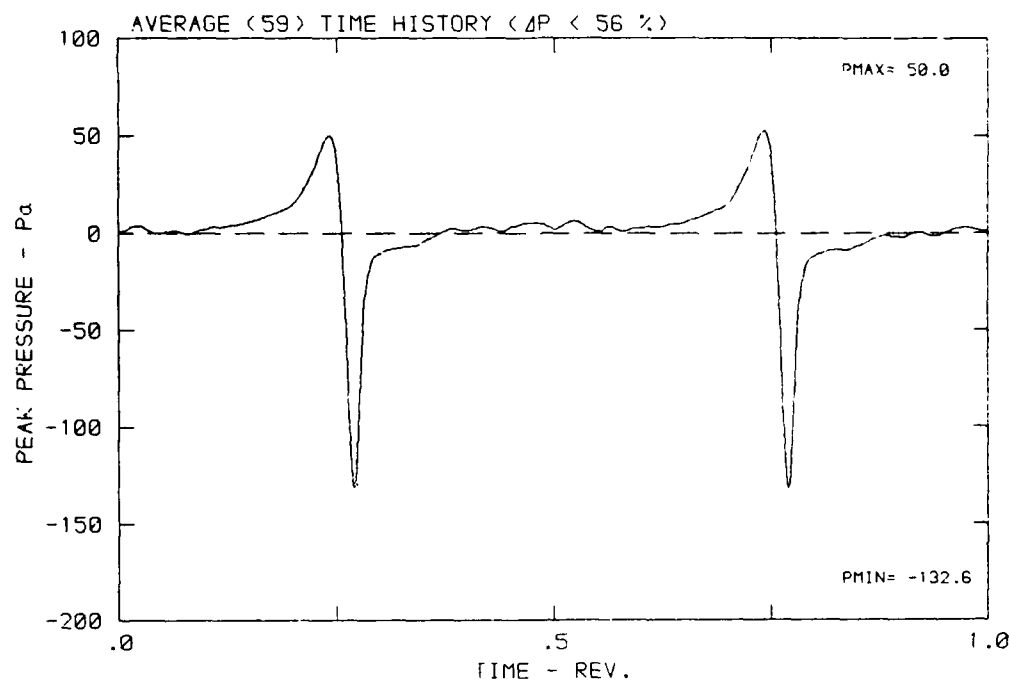
DATA POINT: FN-3 RUN: 168 MP: 8

p: 19.9° MH: .8740 n: 2700 rpm v/u: .269 ϕ : 3.6° T: 288.2 K



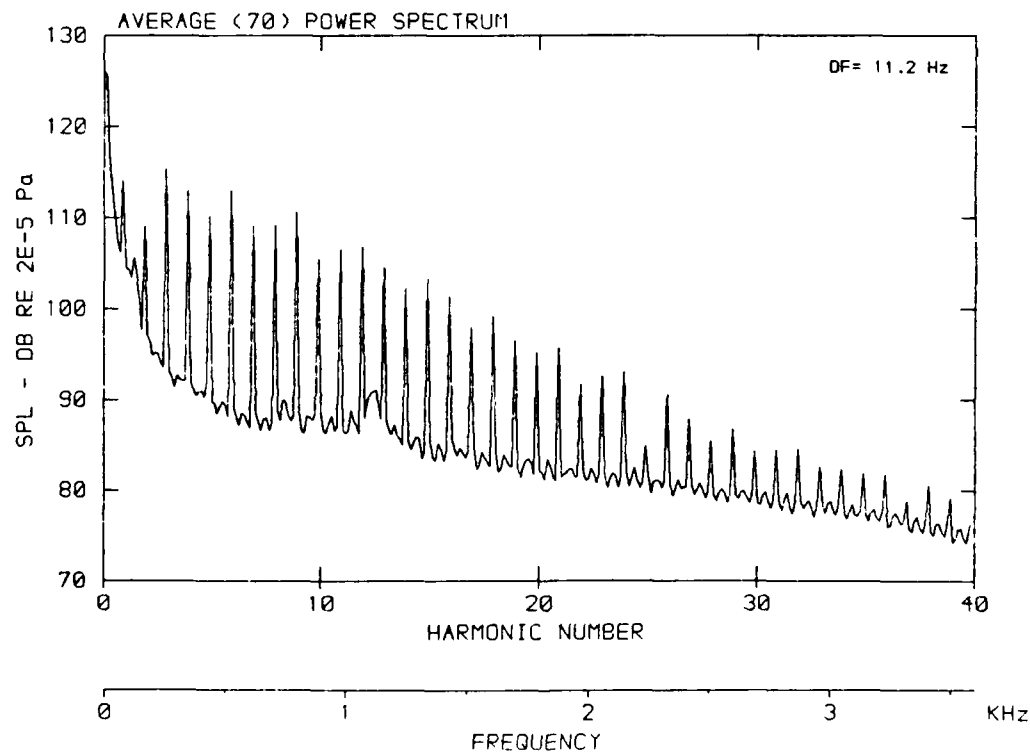
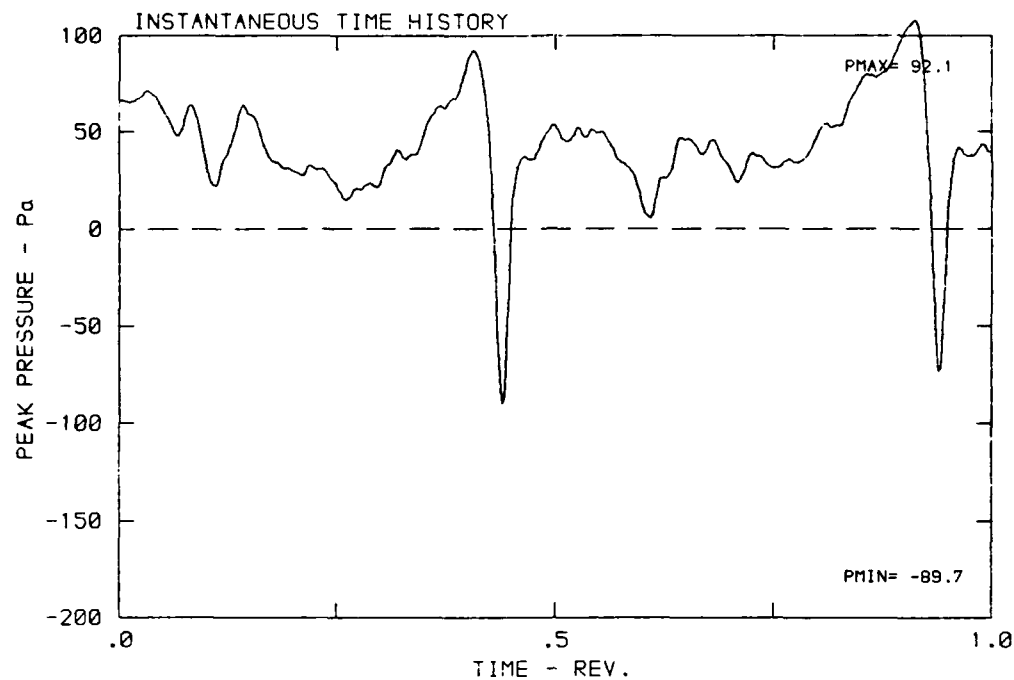
DATA POINT: FN-3 RUN: 168 MP: 8

β : 19.9° MH: .8740 n: 2700 rpm v/u: .269 ϕ : 3.6° T: 288.2 K



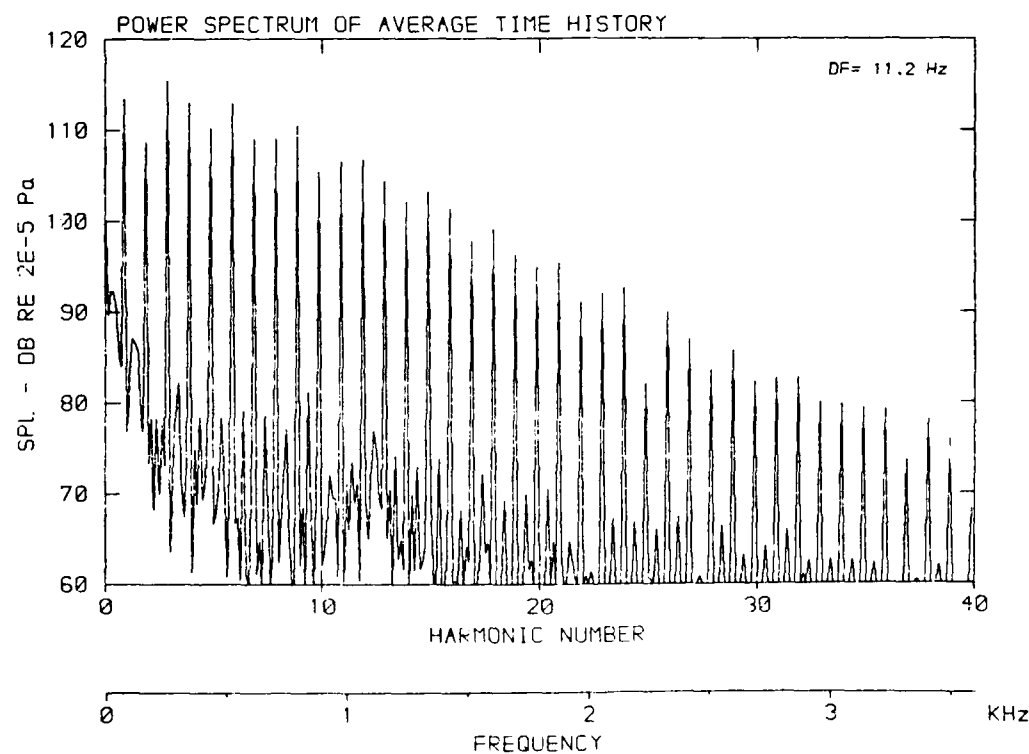
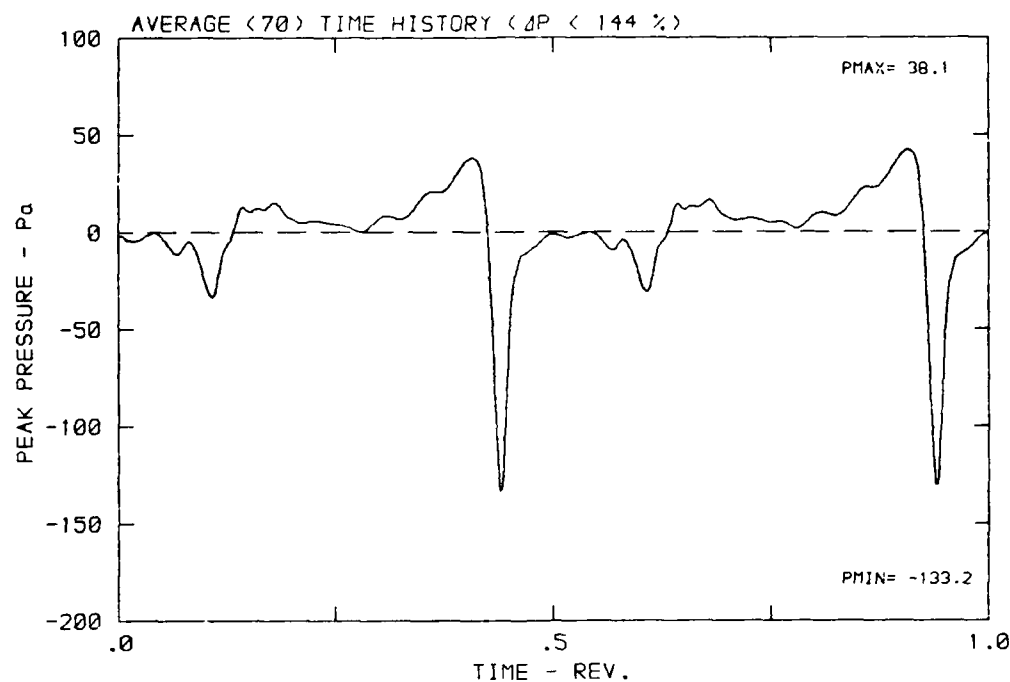
DATA POINT: FN-3 RUN: 168 MP: 3

β : 19.9° MH: .8740 n: 2700 rpm v/u: .269 ϕ : 3.6° T: 288.2 K



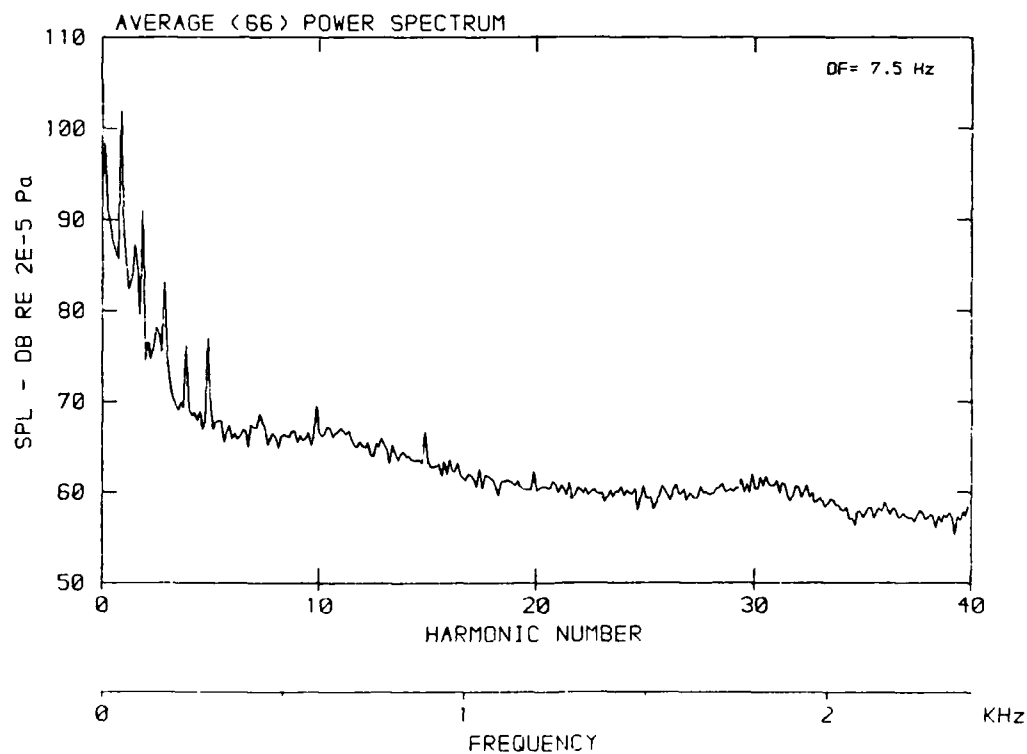
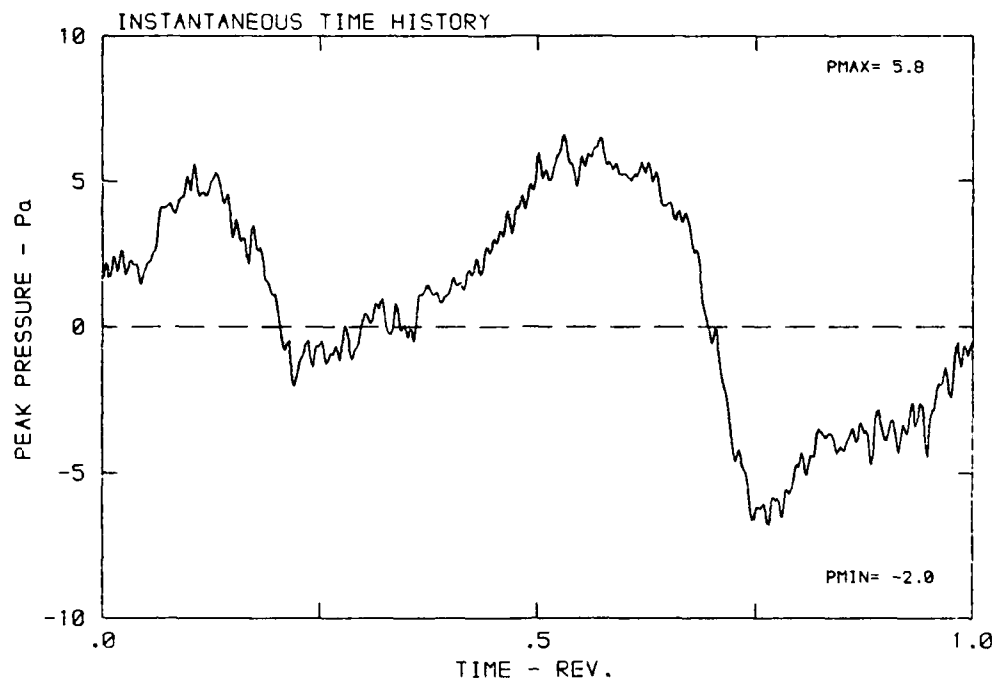
DATA POINT: FN-3 RUN: 168 MP: 9

β : 19.9° MH: .8740 n: 2700 rpm v/u: .269 ϕ : 3.6° T: 288.2 K



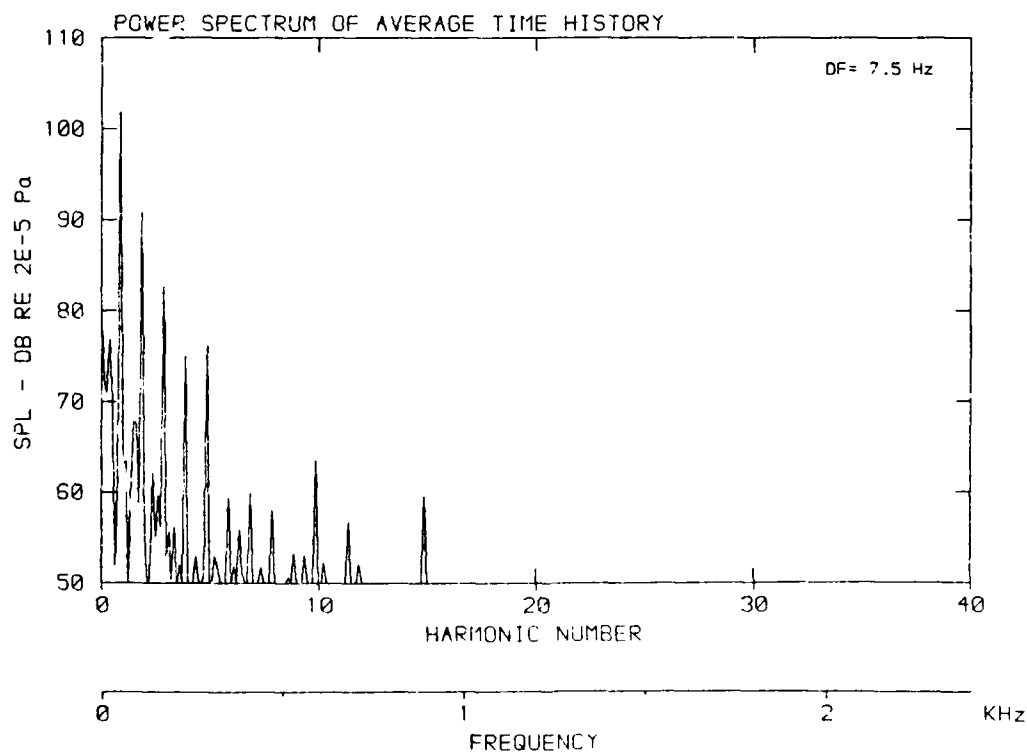
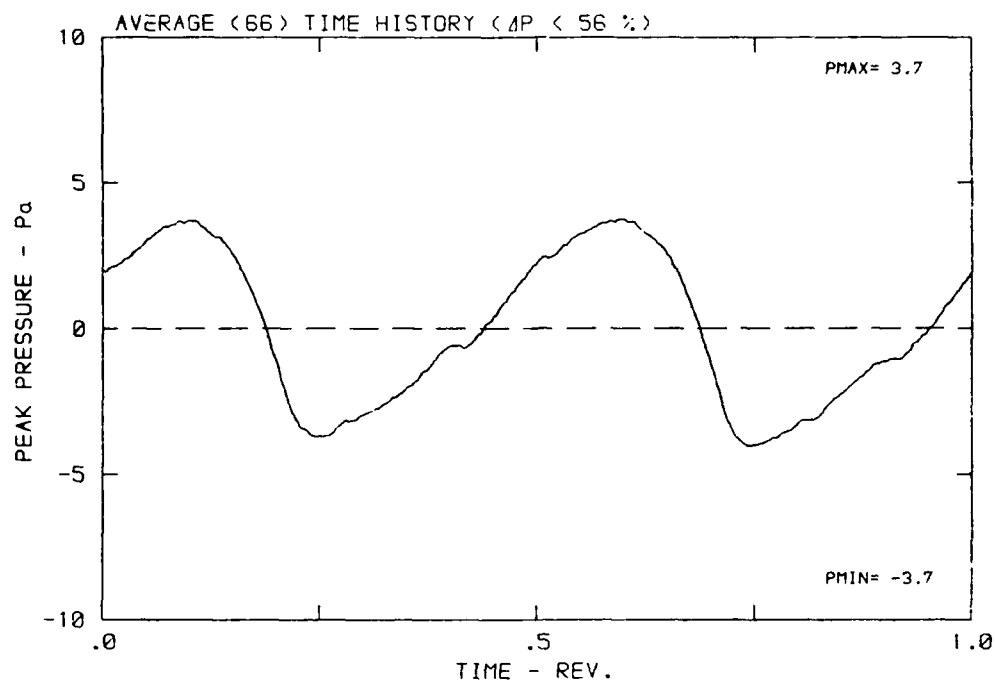
DATA POINT: FN-4 RUN: 169 MP: 1

β : 23.7° MH: .5832 n: 1800 rpm v/u: .266 ϕ : 3.6° T: 287.3 K



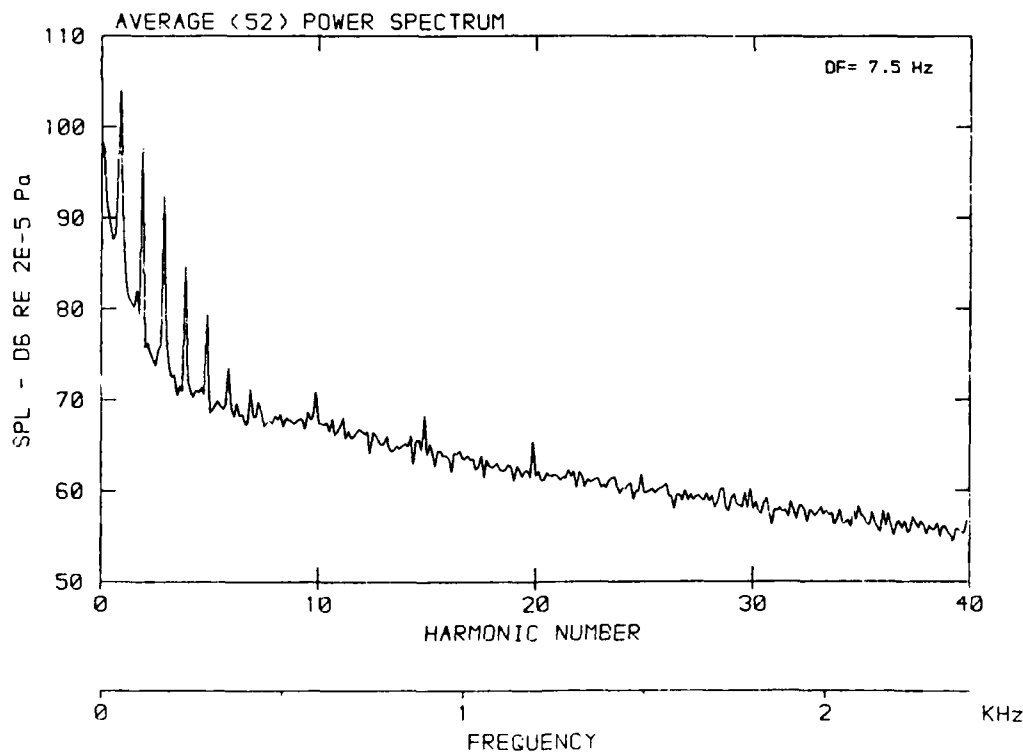
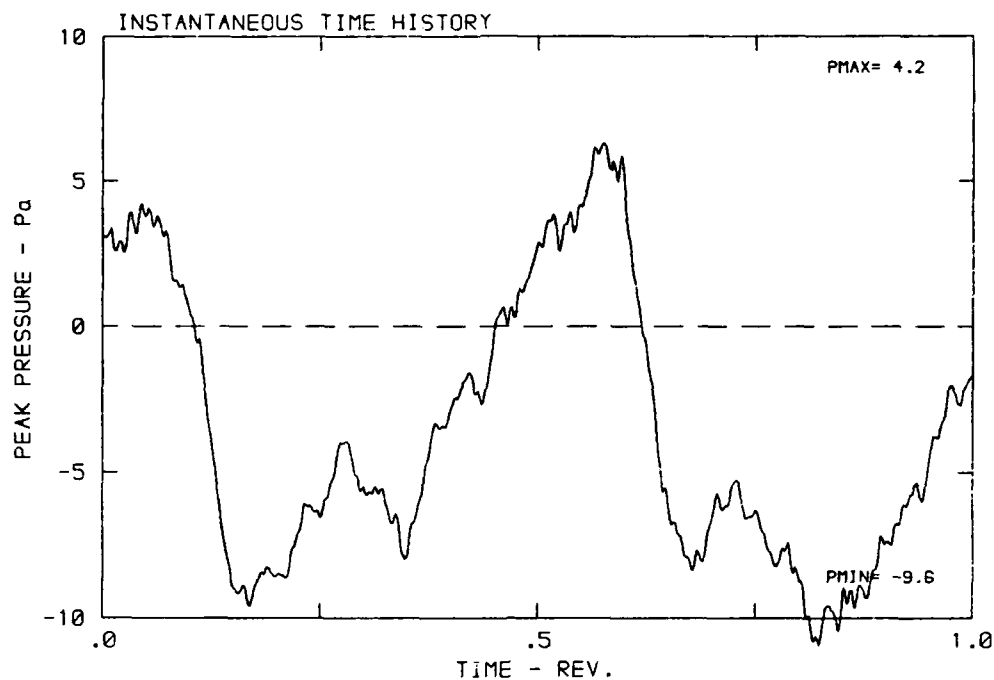
DATA POINT: FN-4 RUN: 169 MP: 1

β : 23.7° MH: .5832 n: 1800 rpm v/u: .266 ϕ : 3.6° T: 287.3 K



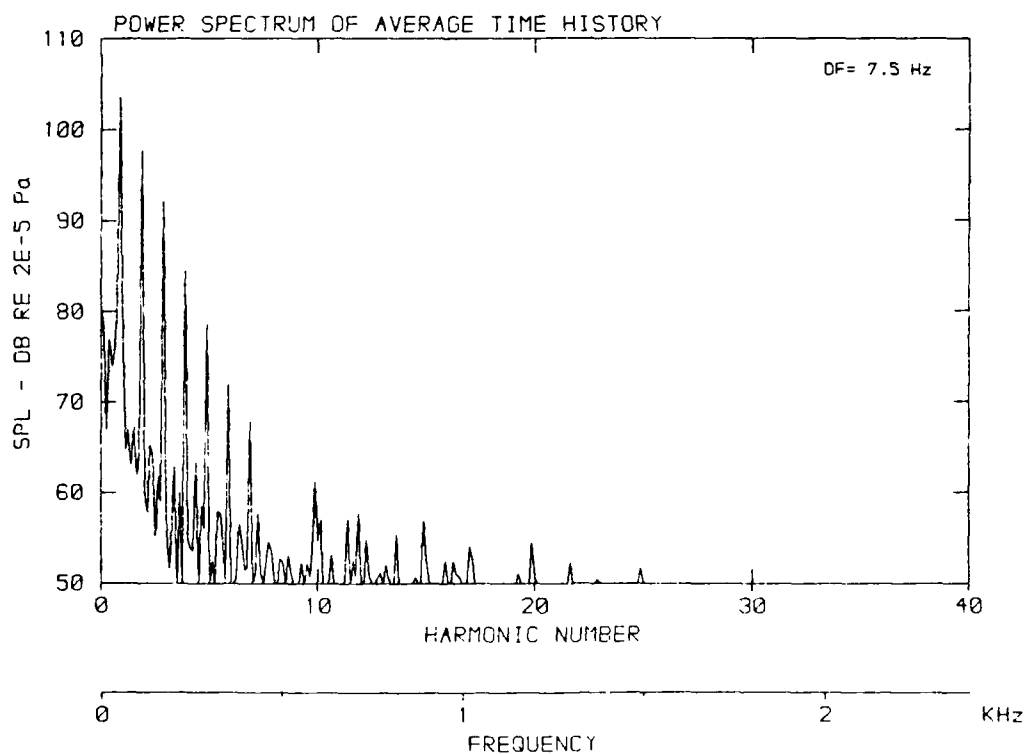
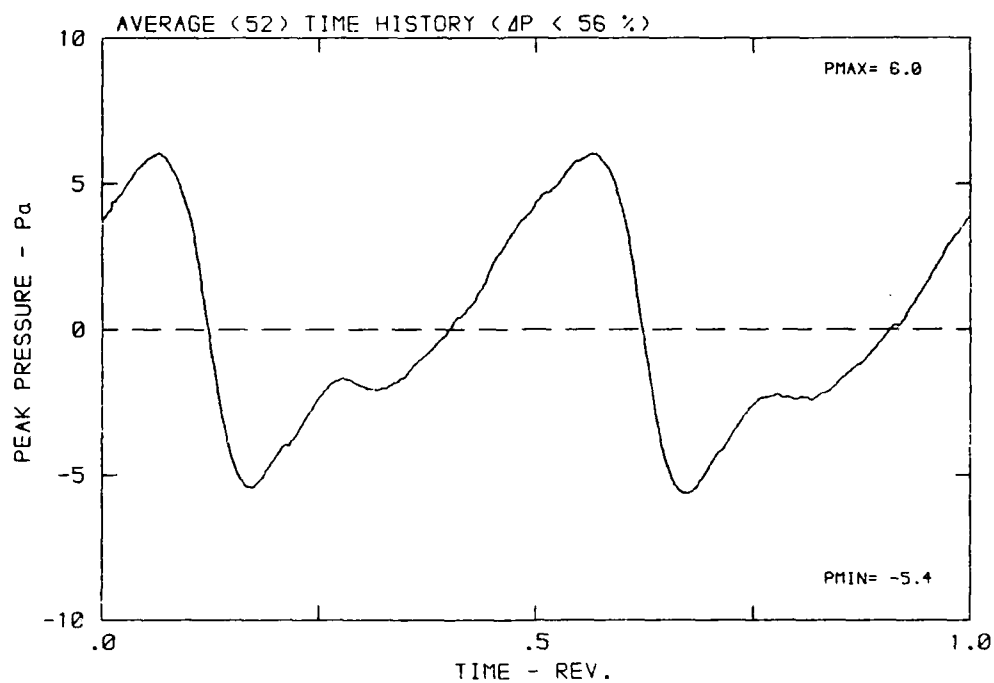
DATA POINT: FN-4 RUN: 169 MP: 2

β : 23.7° MH: .5832 n: 1800 rpm v/u: .266 ϕ : 3.6° T: 287.3 K



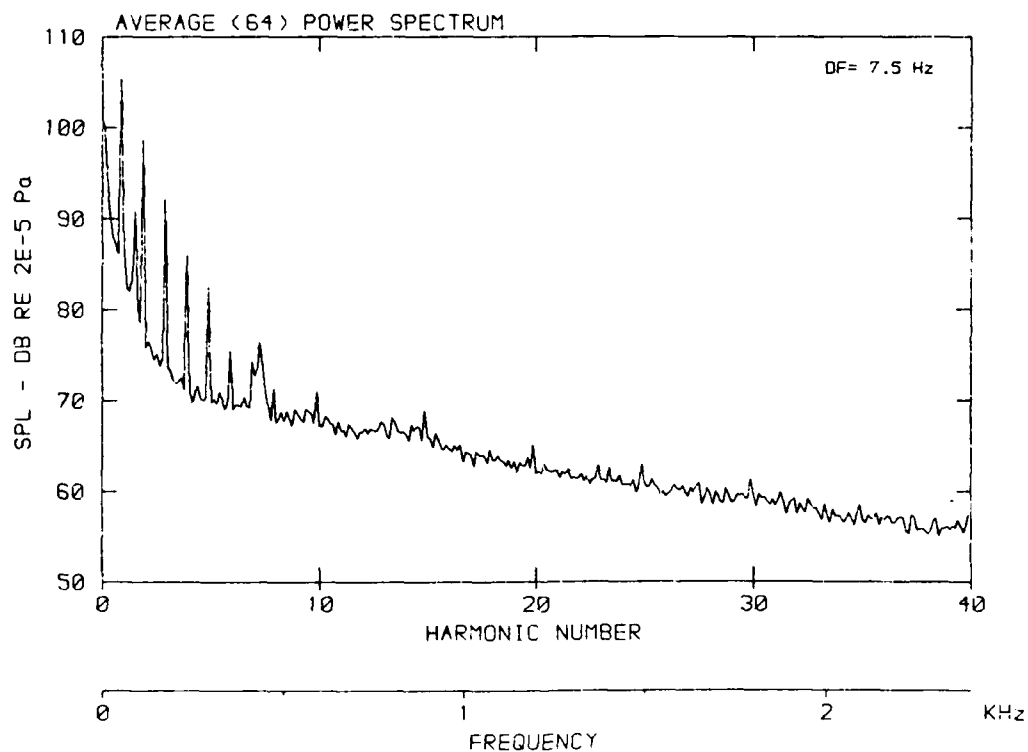
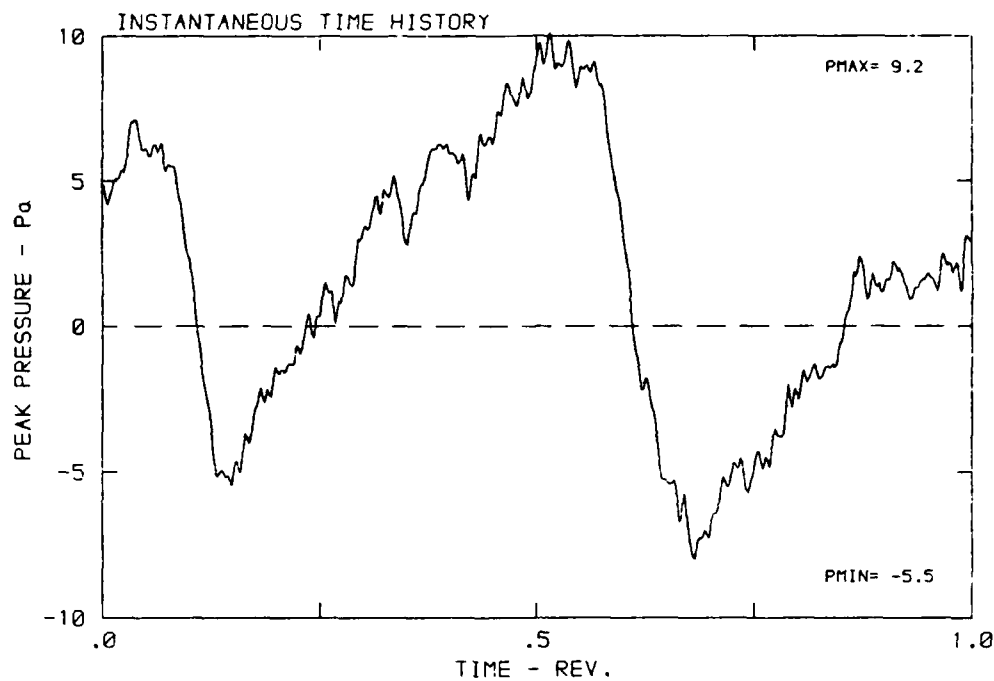
DATA POINT: FN-4 RUN: 169 MP: 2

β : 23.7° MH: .5832 n: 1800 rpm v/u: .266 ϕ : 3.6° T: 287.3 K



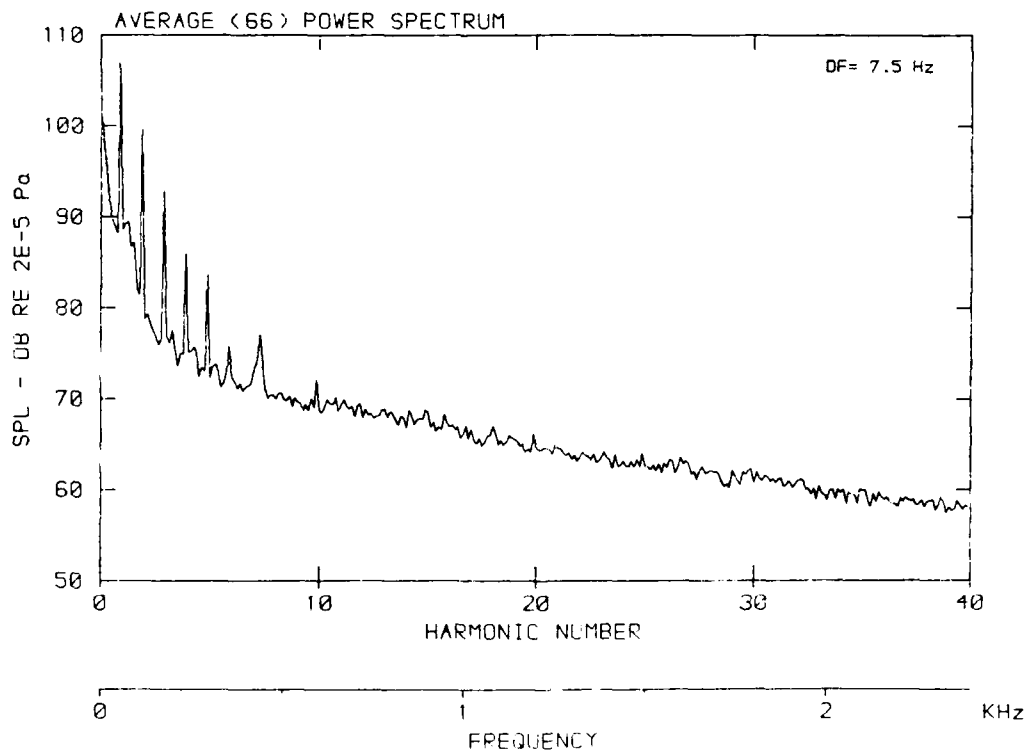
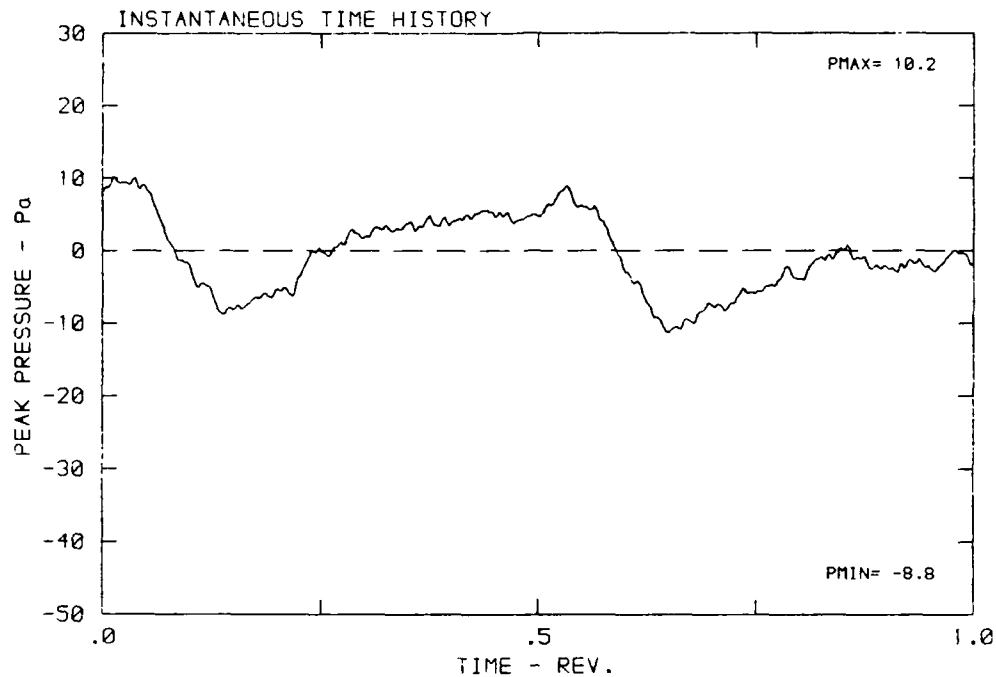
DATA POINT: FN-4 RUN: 169 MP: 3

β : 23.7° MH: .5832 n: 1800 rpm v/u : .266 ϕ : 3.6° T: 287.3 K



DATA POINT: FN-4 RUN: 169 MP: 4

β : 23.7° MH: .5832 n: 1800 rpm v/u: .266 ϕ : 3.6° T: 287.3 K



AD-A174 980

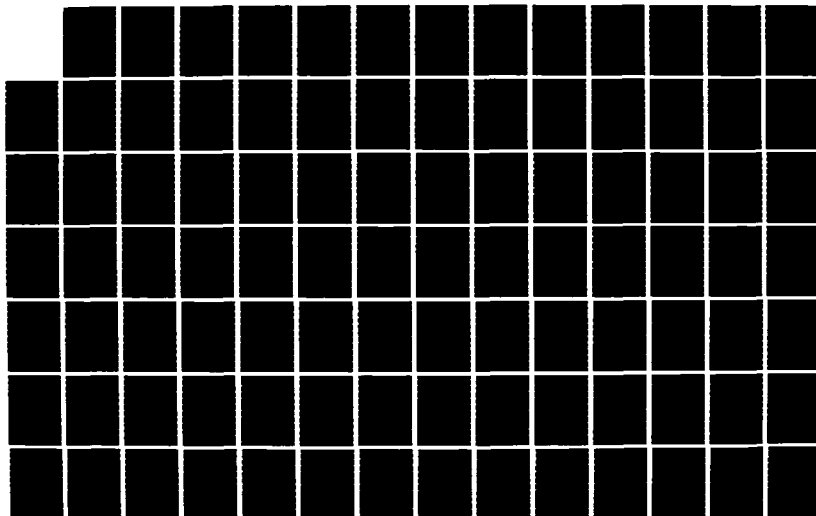
DFVLR/FRA (DEUTSCHE FORSCHUNGS-UND VERSUCHSANSTALT FUER 4/6
LUFT UND RAUMFAHR. (U) DEUTSCHE FORSCHUNGS- UND
VERSUCHSANSTALT FUER LUFT- UND RAUMF..

UNCLASSIFIED

M M DOBRZYNSKI ET AL. 1986

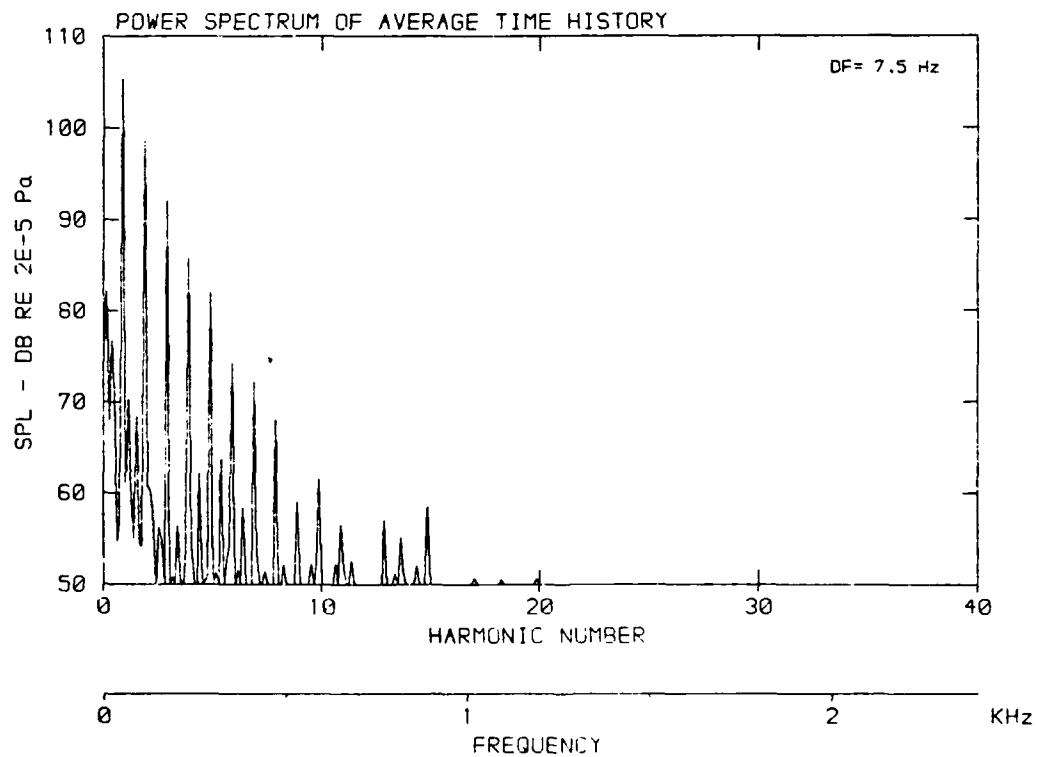
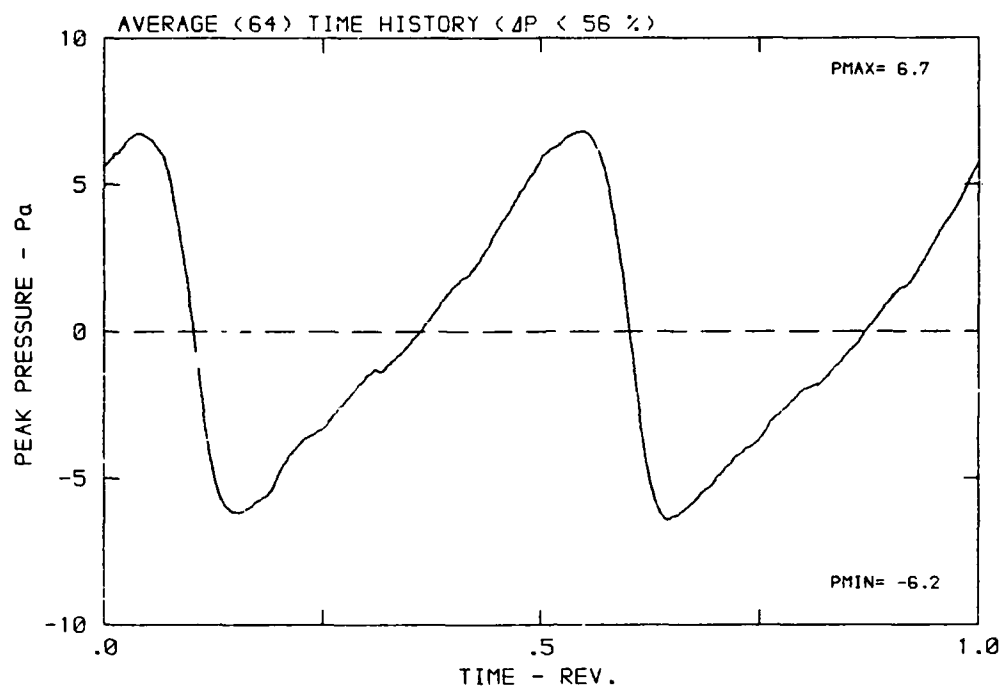
F/G 28/1

NL



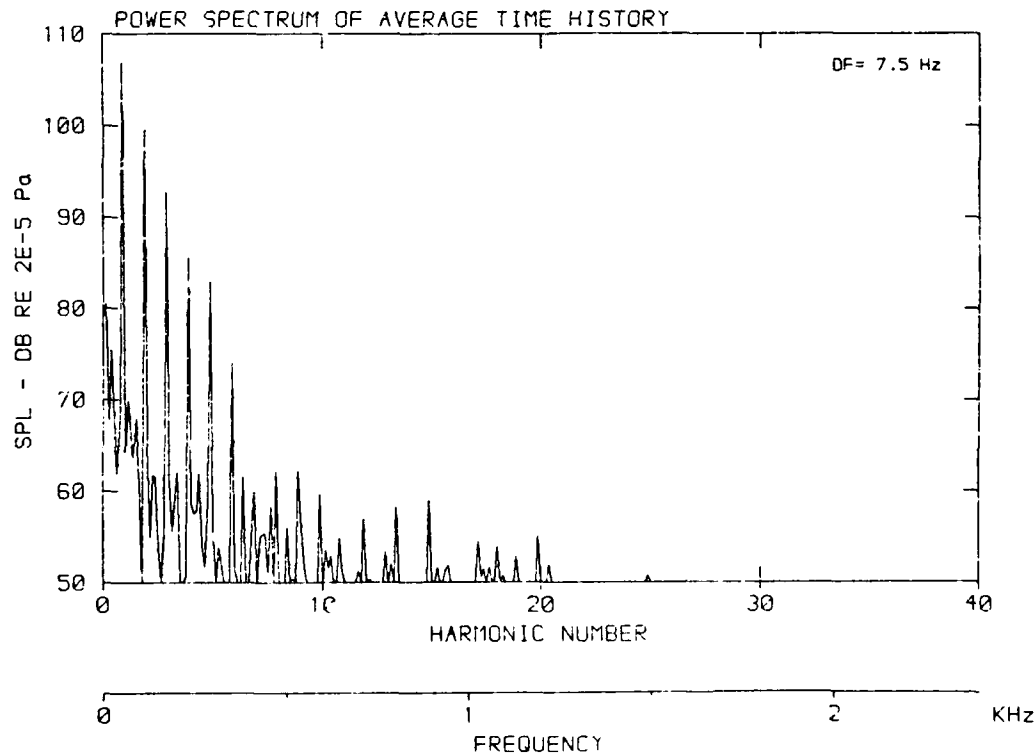
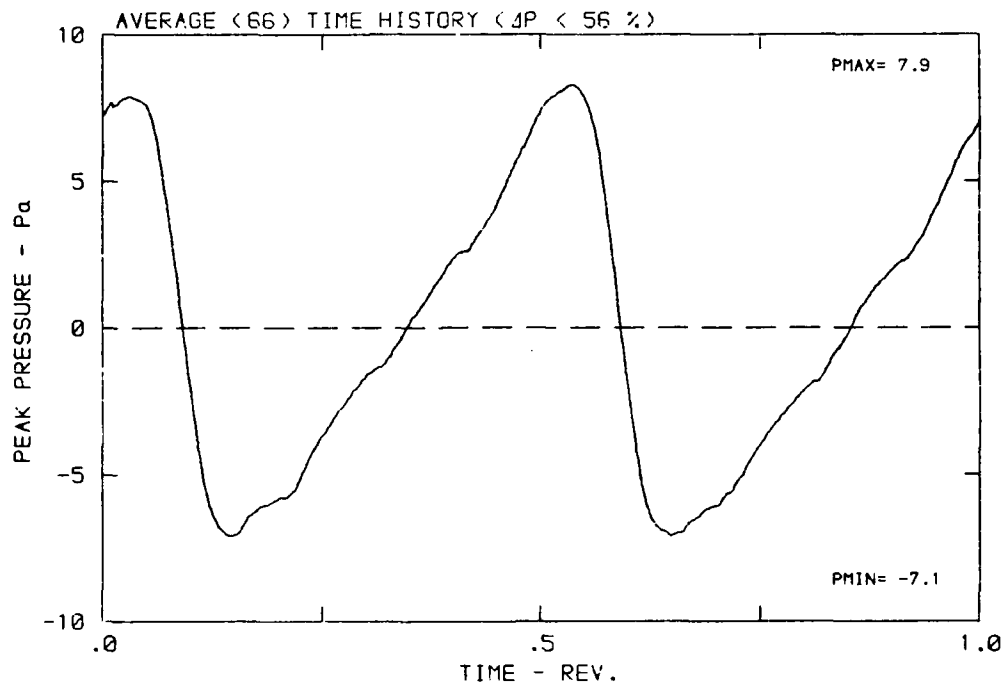
DATA POINT: FN-4 RUN: 169 MP: 3

β : 23.7° MH: .5832 n: 1800 rpm v/u: .266 ϕ : 3.6° T: 287.3 K



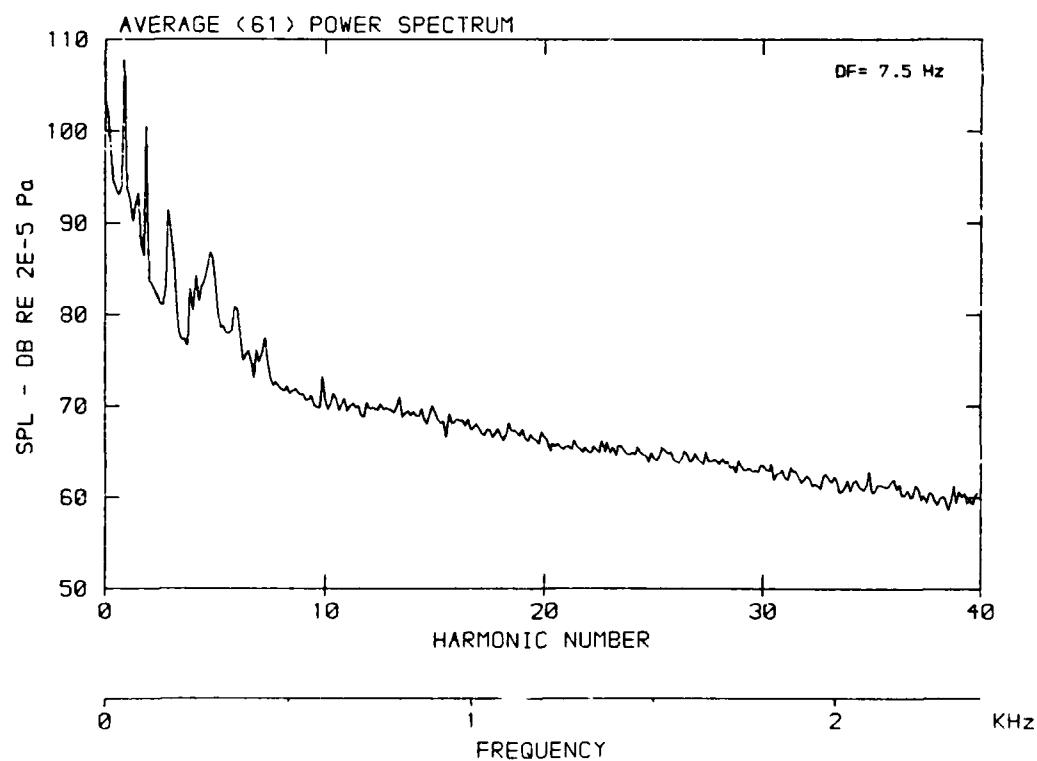
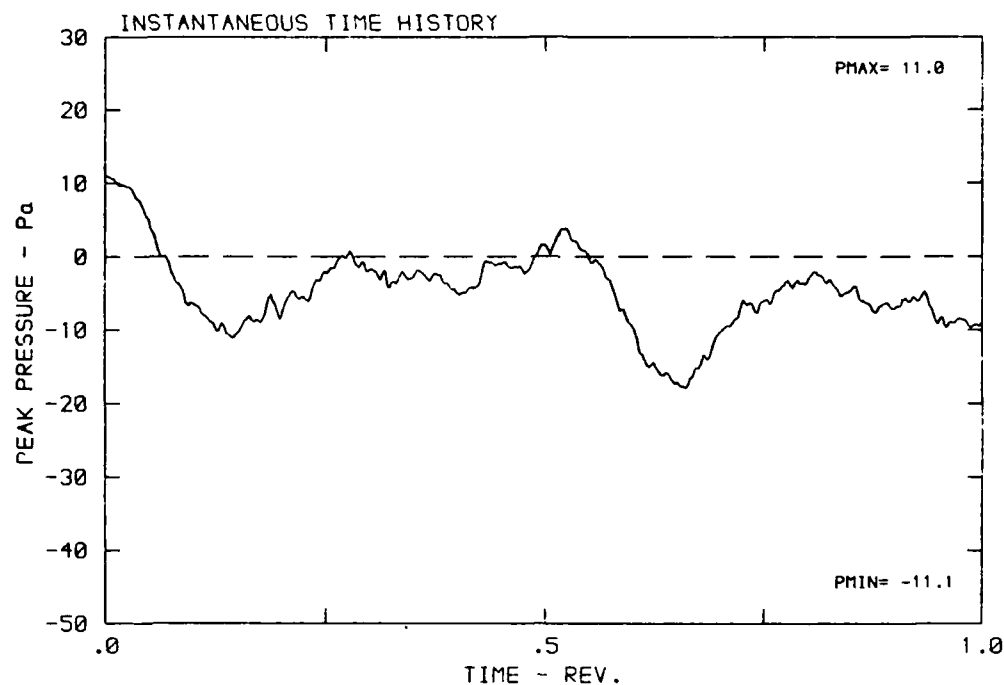
DATA POINT: FN-4 RUN: 169 MP: 4

β : 23.7° MH: .5832 n: 1800 rpm v/u: .266 ϕ : 3.6° T: 287.3 K



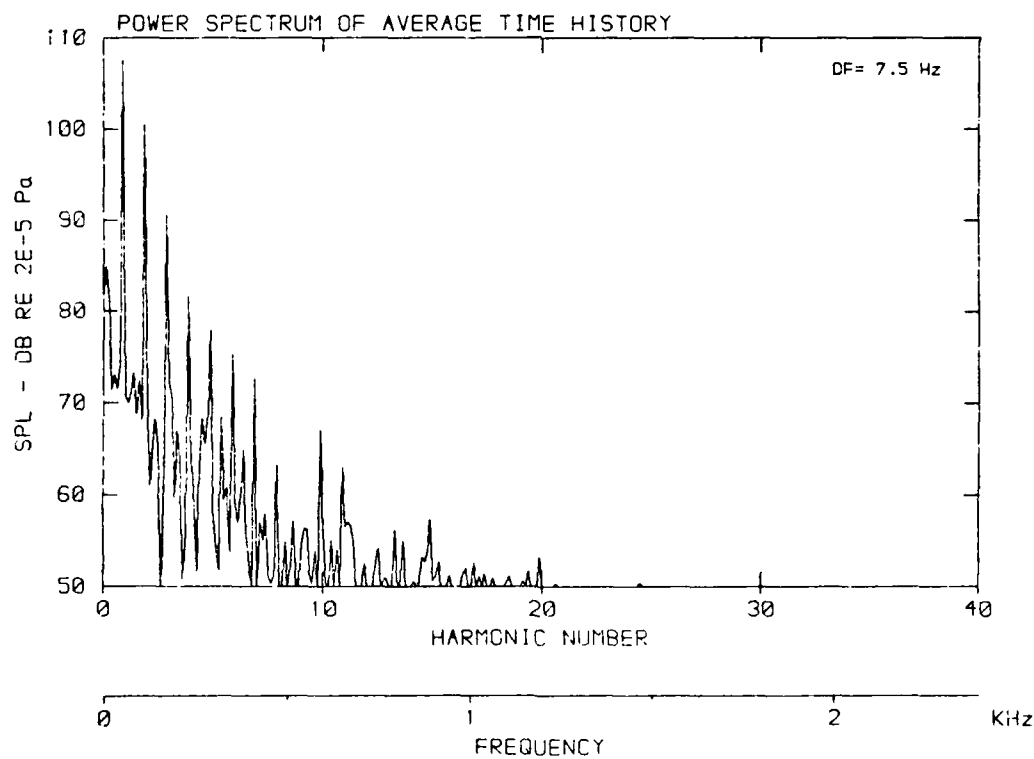
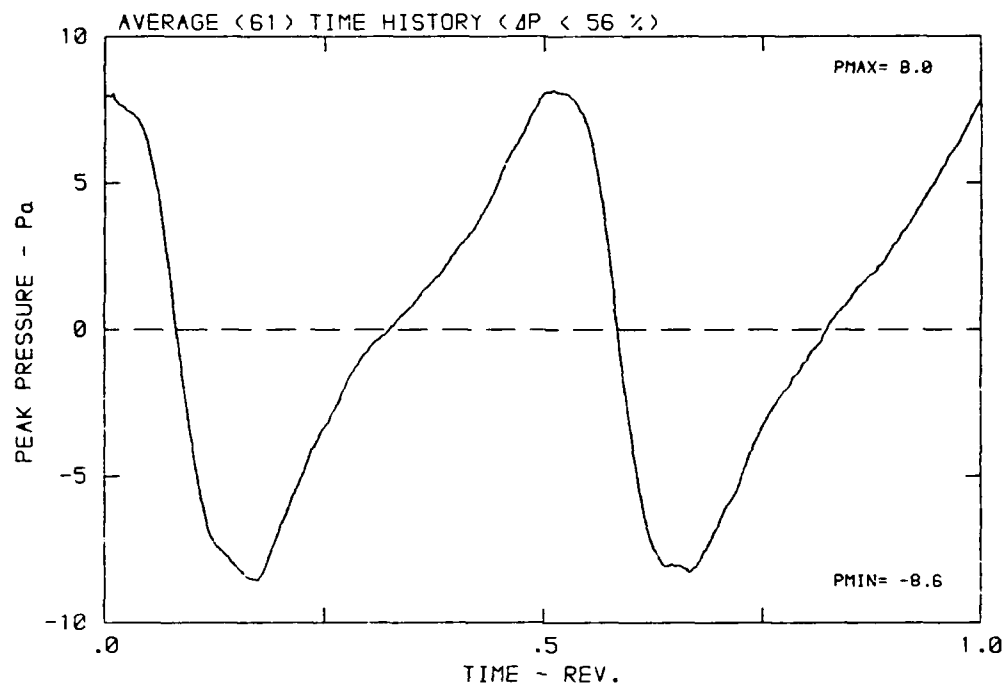
DATA POINT: FN-4 RUN: 169 MP: 5

β : 23.7° MH: .5832 n: 1800 rpm v/u: .266 ϕ : 3.6° T: 287.3 K



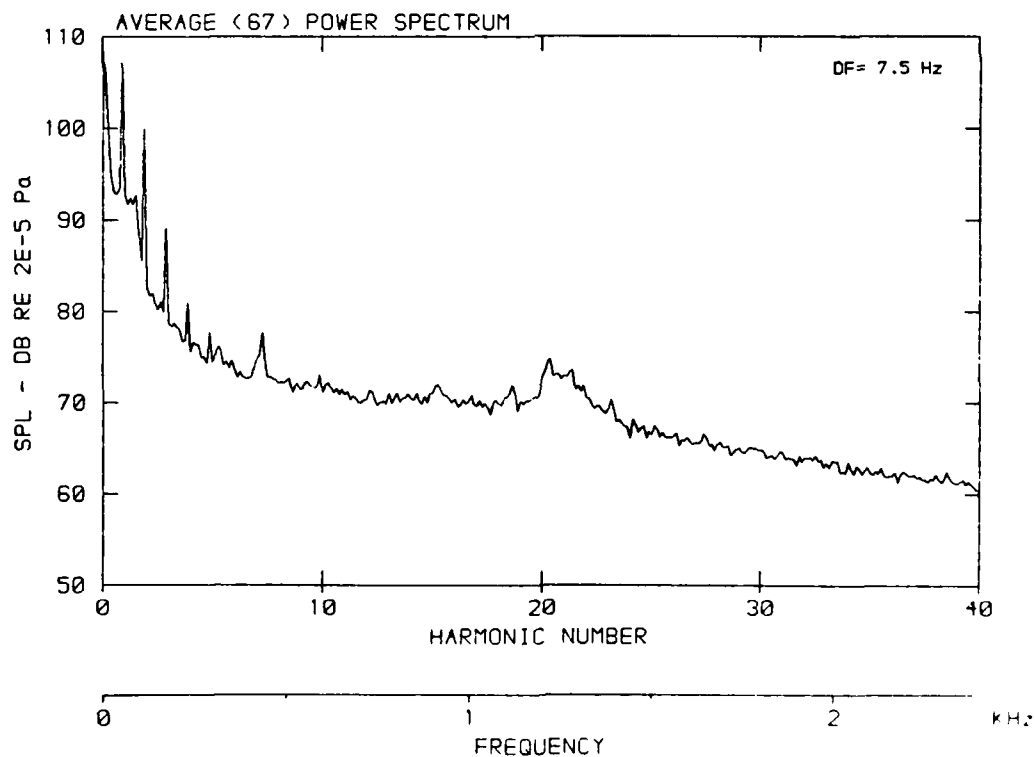
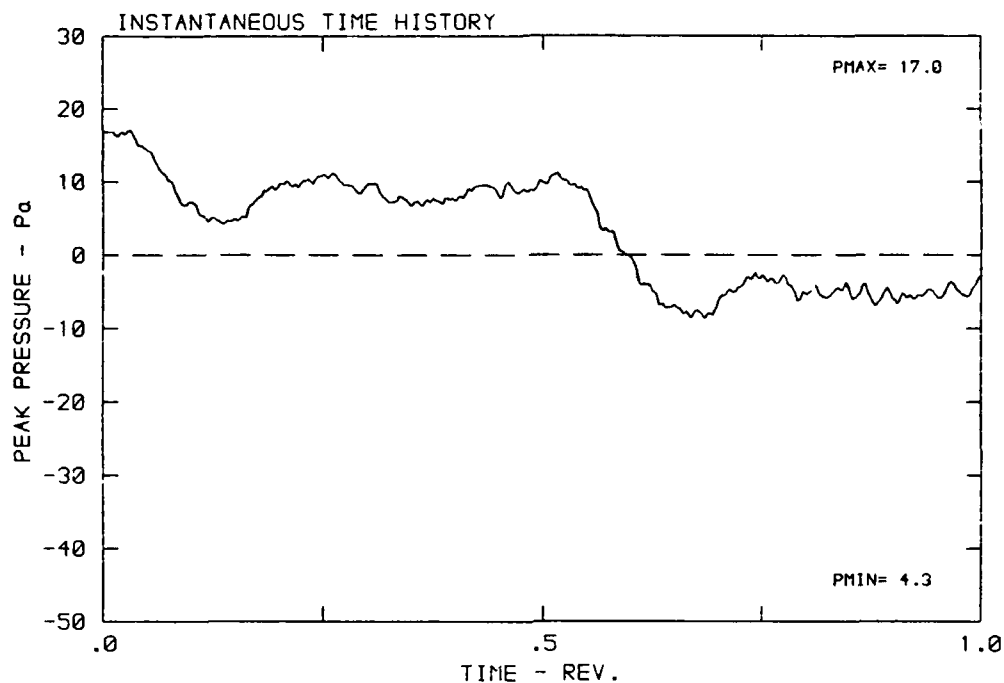
DATA POINT: FN-4 RUN: 169 MP: 5

β : 23.7° MH: .5832 n: 1800 rpm v/u : .266 ϕ : 3.6° T: 287.3 K



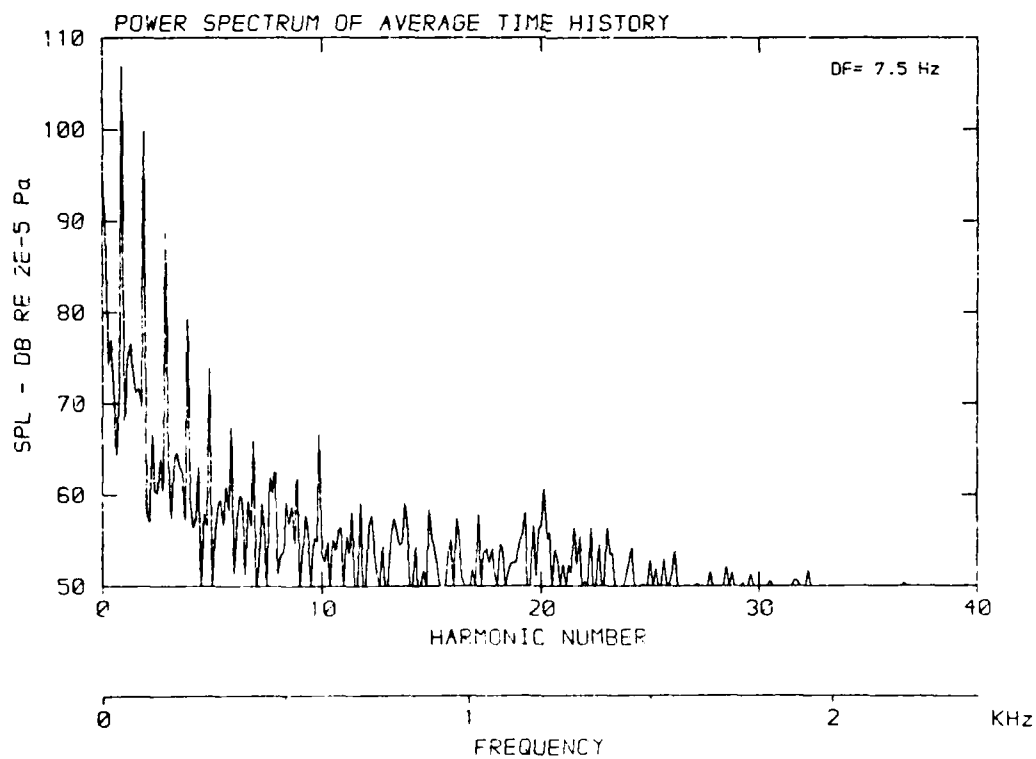
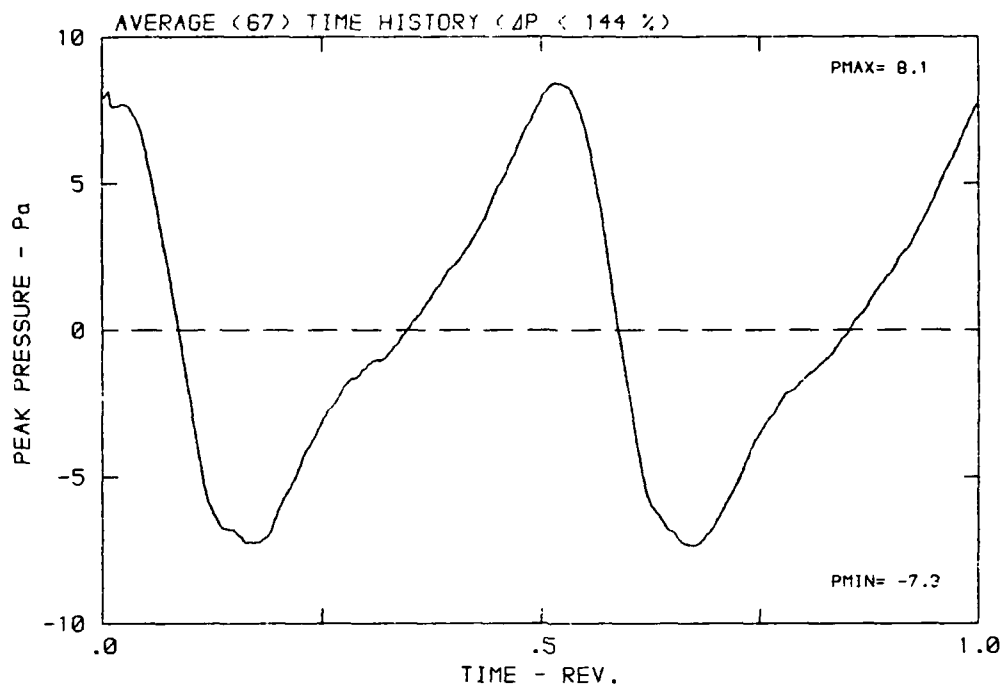
DATA POINT: FN-4 RUN: 169 MP: 6

β : 23.7° MH: .5832 n: 1800 rpm v/u : .266 ϕ : 3.6° T: 297.3 K



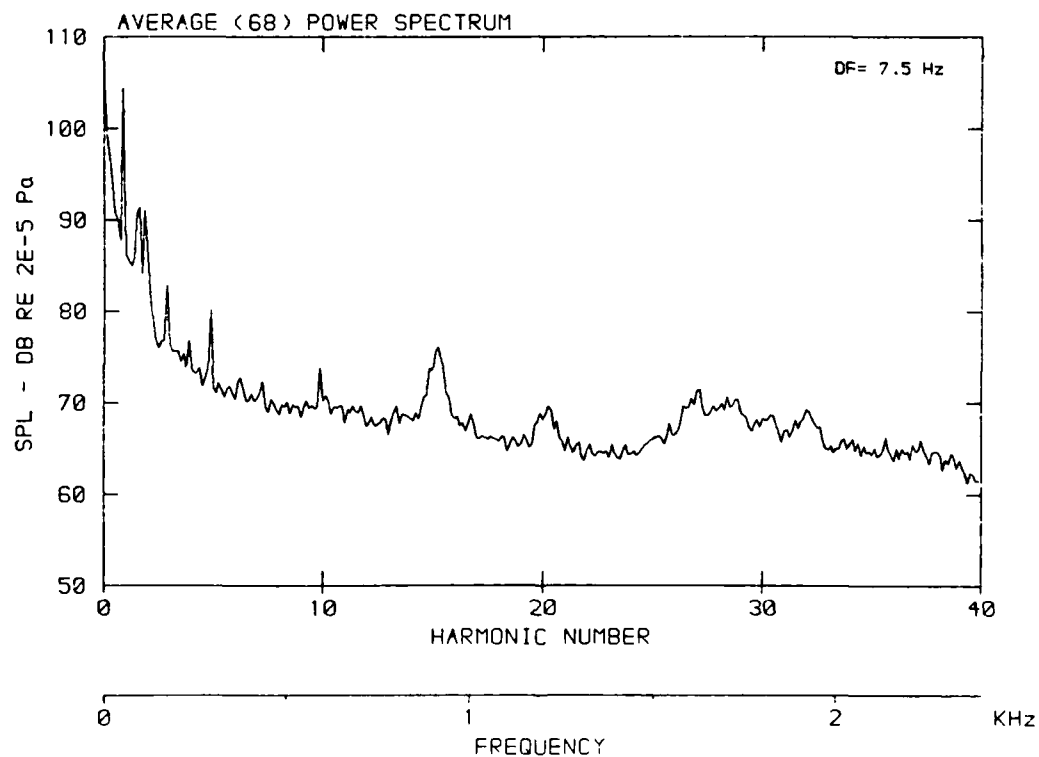
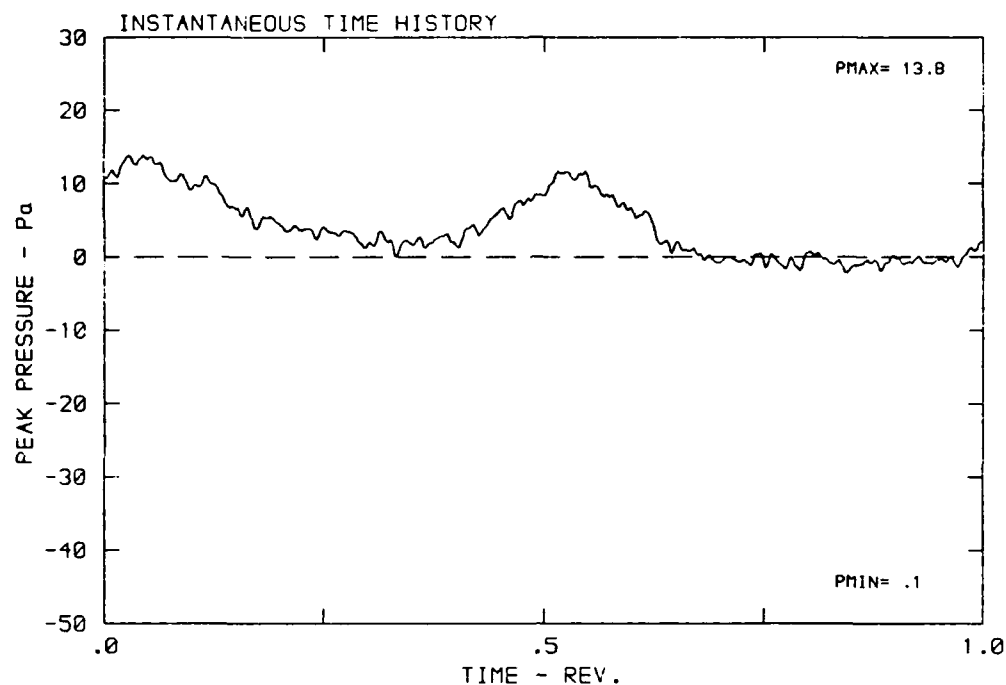
DATA POINT: FN-4 RUN: 169 MP: 6

β : 23.7° MH: .5832 n: 1800 rpm v/u : .266 ϕ : 3.6° T: 287.3 K



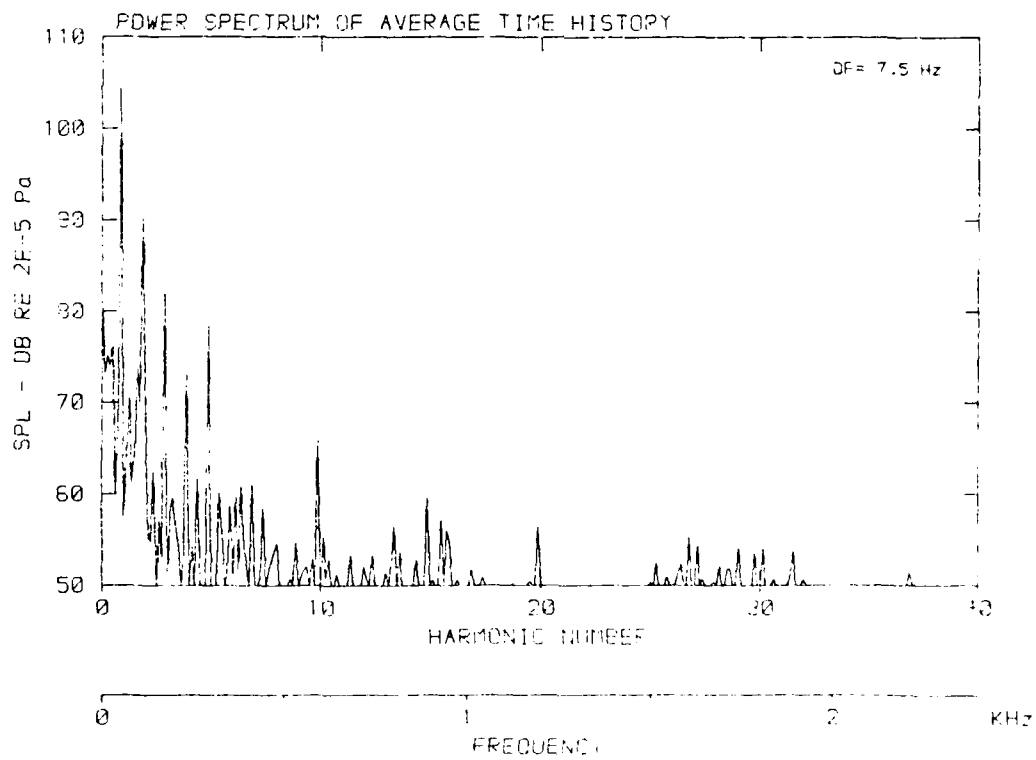
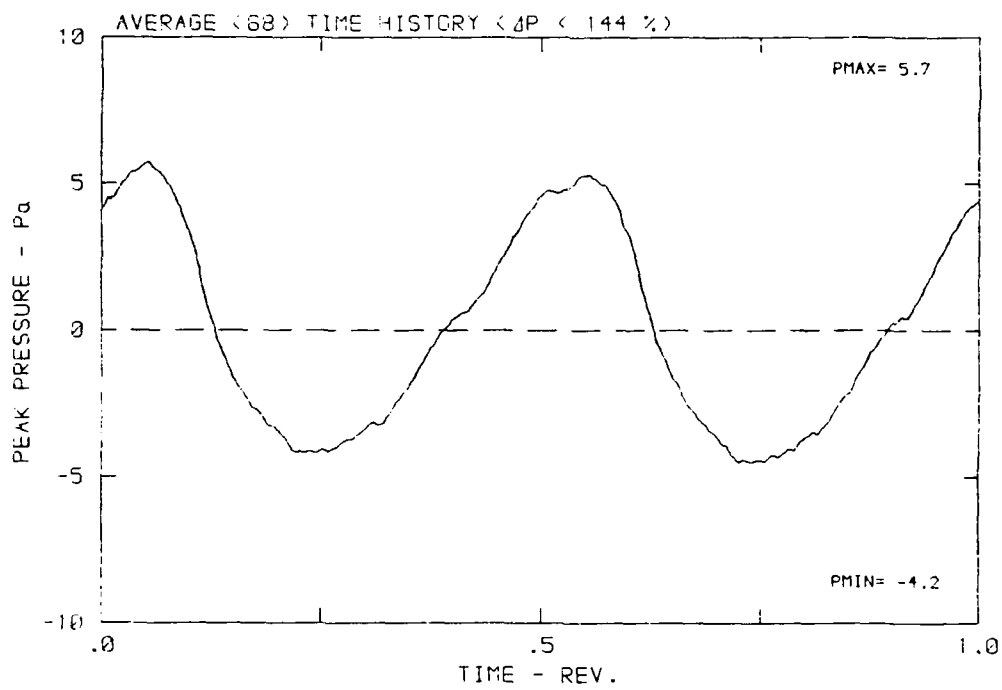
DATA POINT: FN-4 RUN: 169 MP: 7

β : 23.7° MH: .5832 n: 1800 rpm v/u : .266 ϕ : 3.6° T: 287.3 K



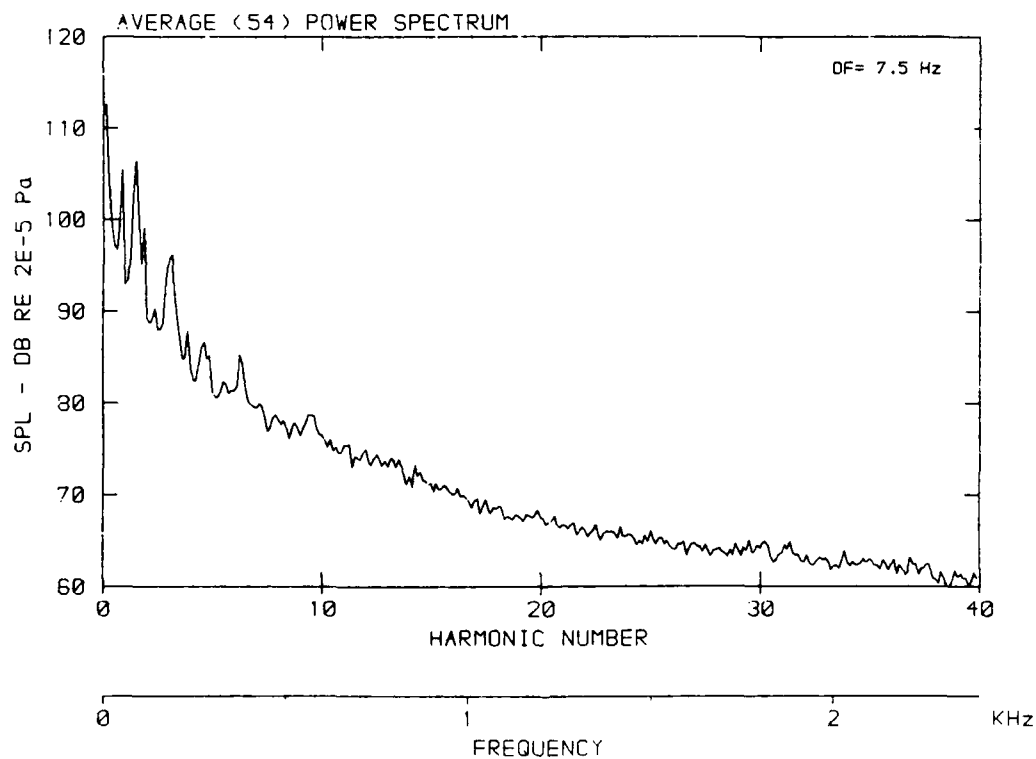
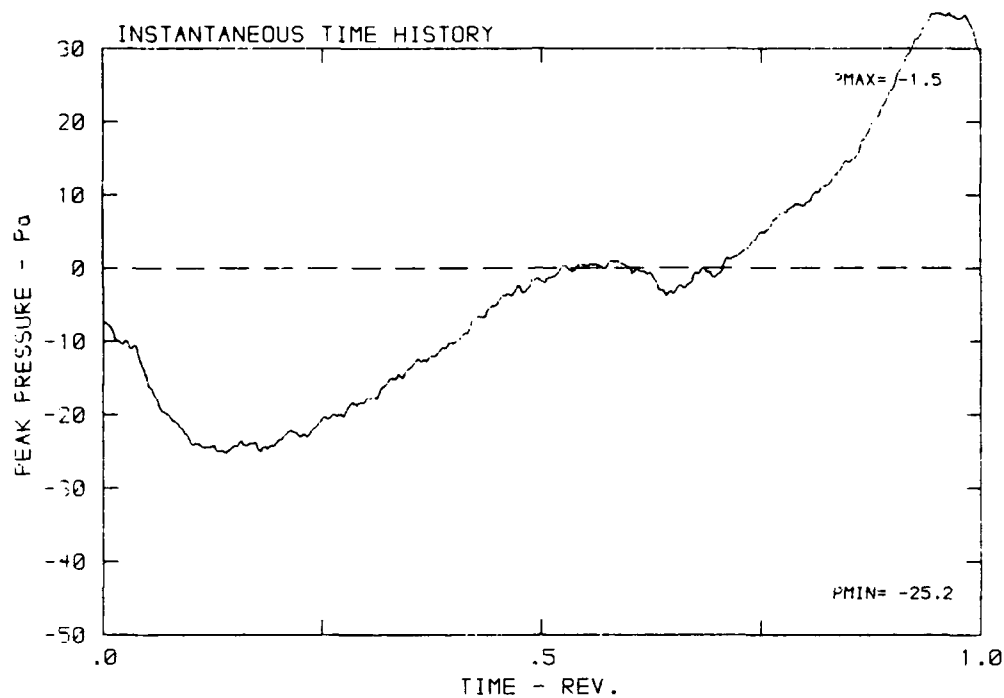
DATA POINT: FN-4 RUN: 169 MP: 7

β : 23.7° MH: .5832 n: 1800 rpm v/u : .266 ϕ : 3.6° T: 287.3 K



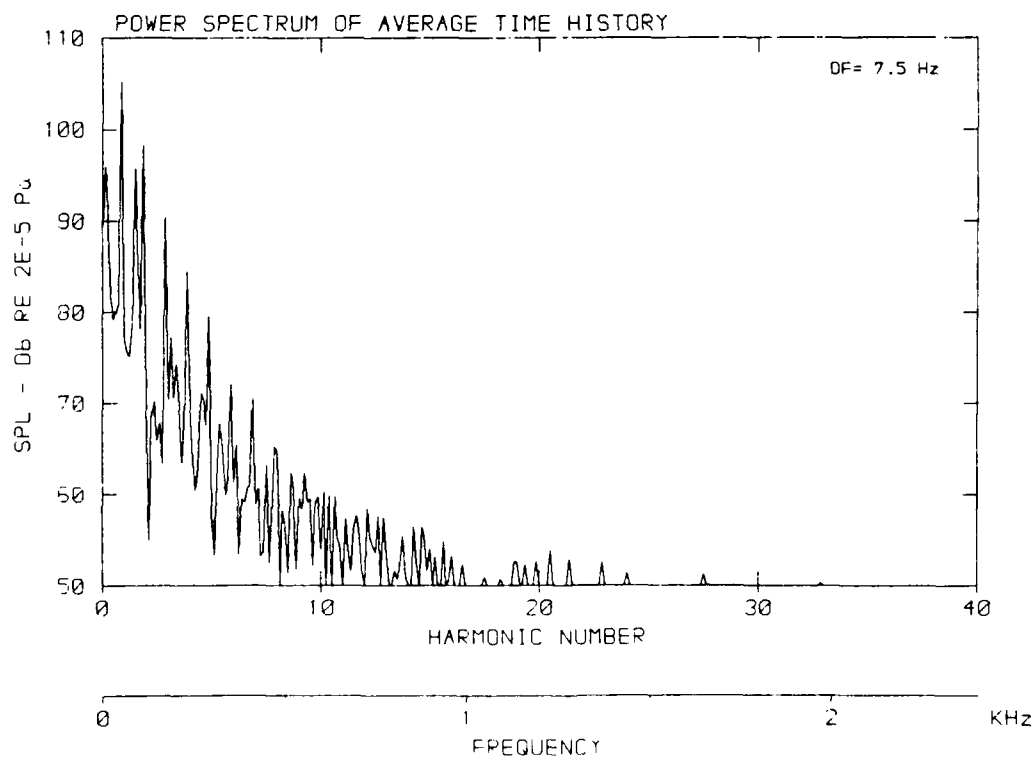
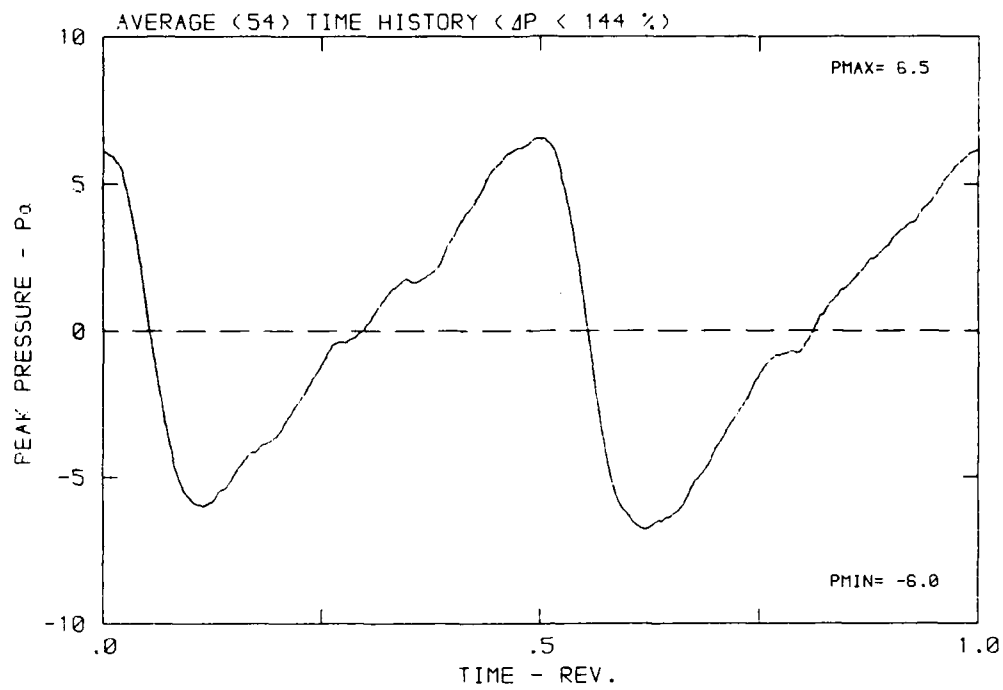
DATA POINT: FN-4 RUN: 169 MP: 8

β : 23.7° MH: .5832 n: 1800 rpm v/u : .266 ϕ : 3.6° T: 287.3 K



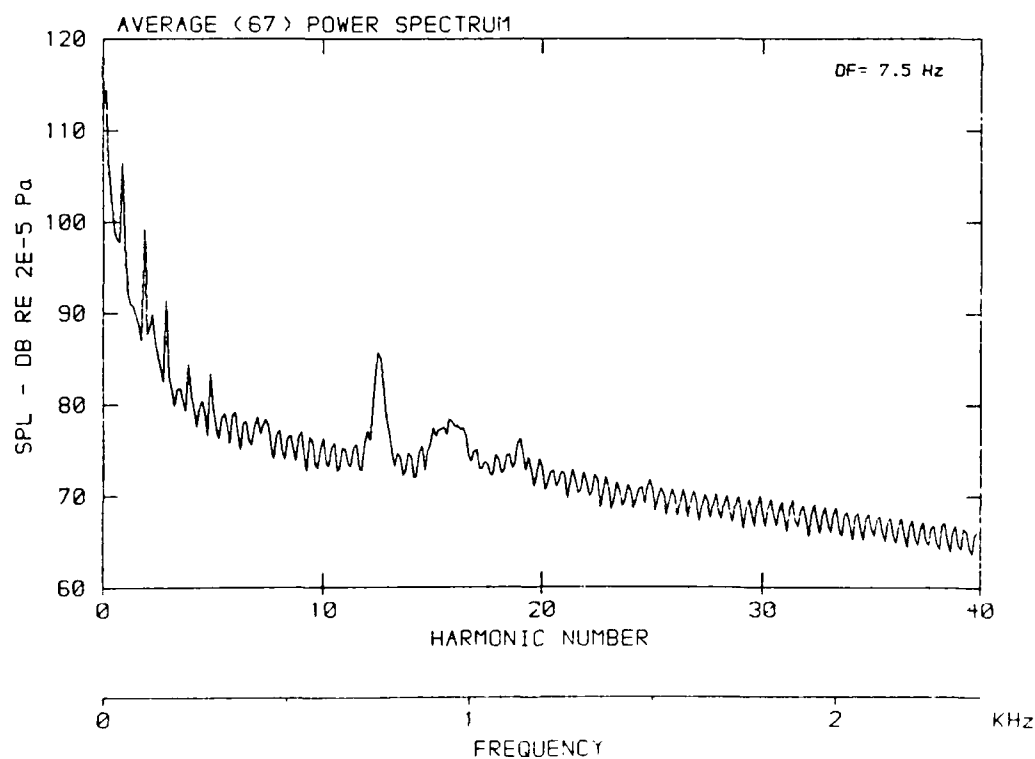
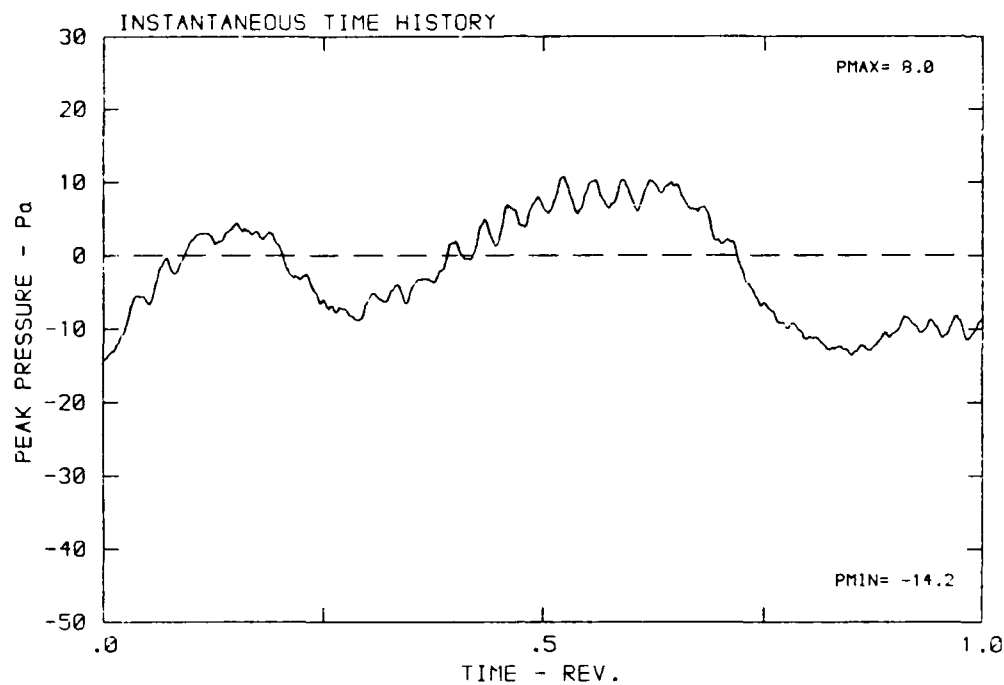
DATA POINT: FN-4 RUN: 169 MP: 8

β : 23.7° MH: .5832 n: 1800 rpm v/u : .266 ϕ : 3.6° T: 287.3 K



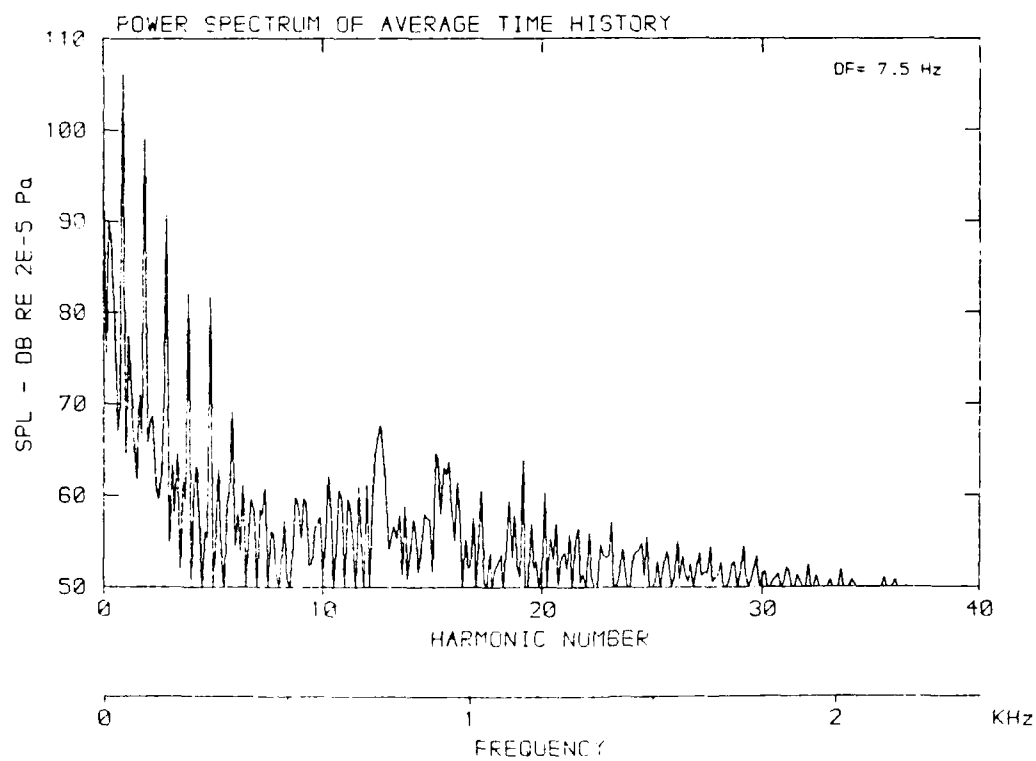
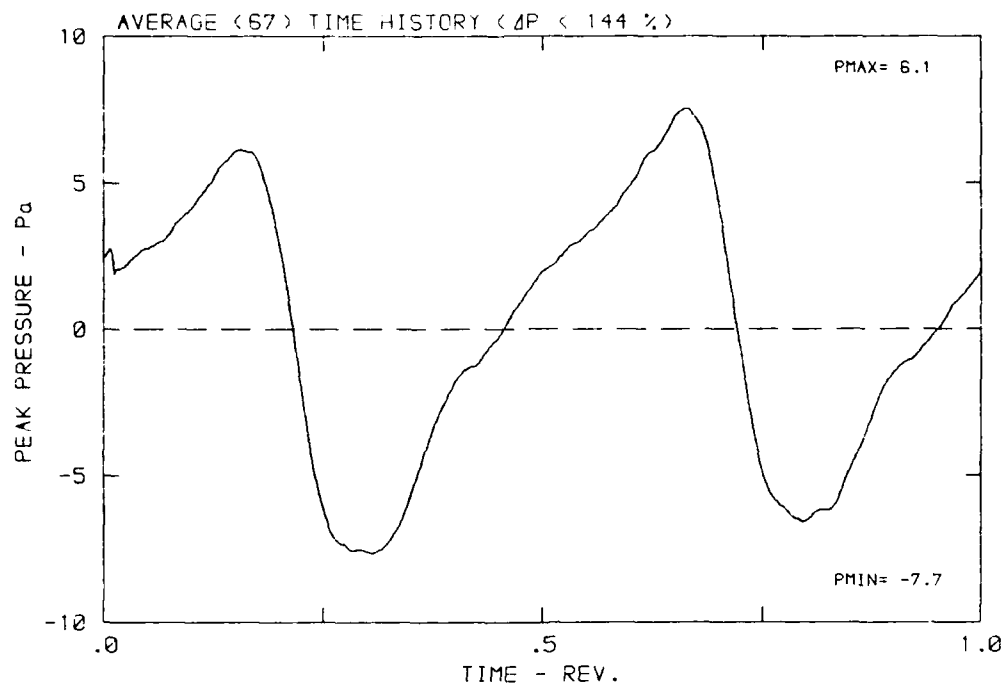
DATA POINT: FN-4 RUN: 169 MP: 9

β : 23.7° MH: .5832 n: 1800 rpm v/u: .266 ϕ : 3.6° T: 287.3 K



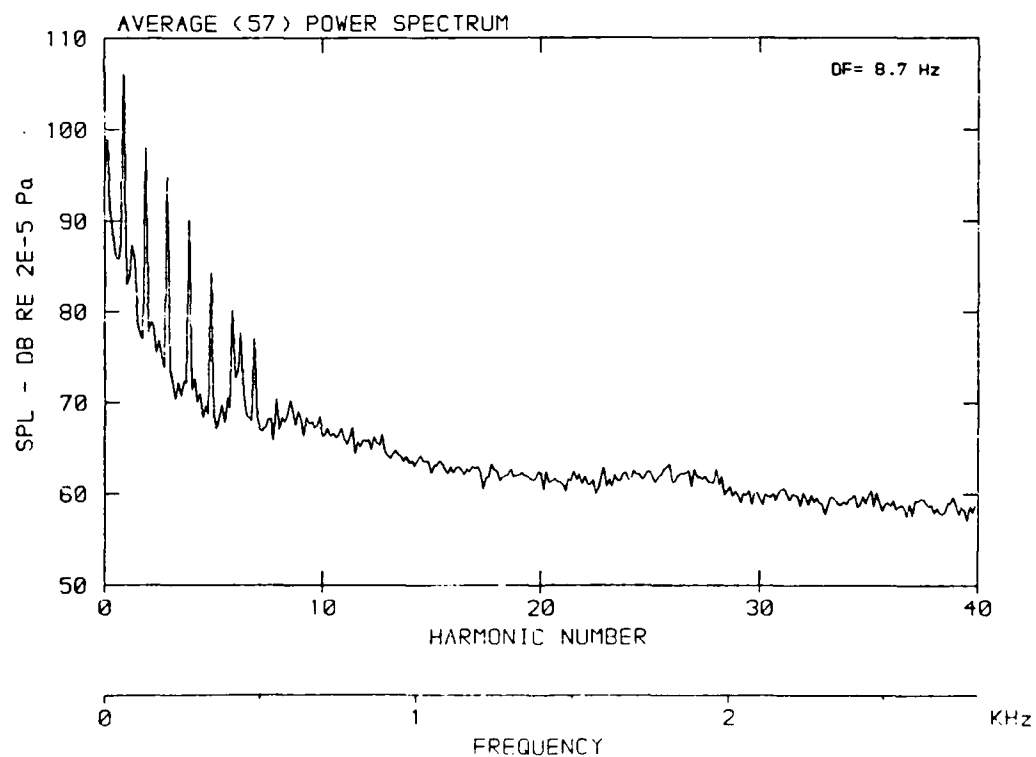
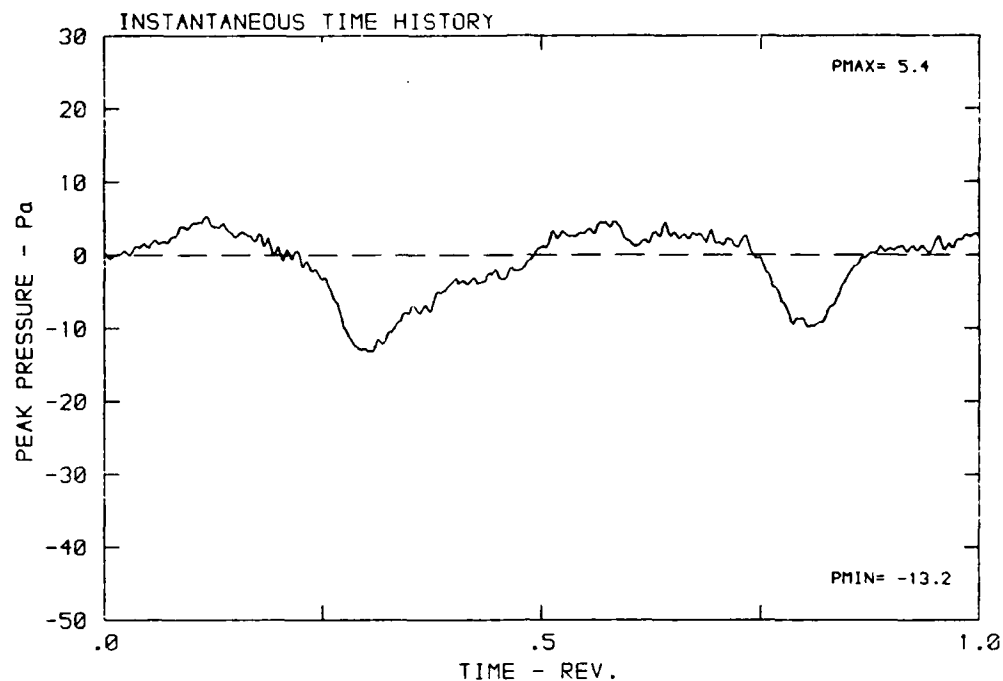
DATA POINT: FN-4 RUN: 169 MP: 9

β : 23.7° MH: .5832 n: 1800 rpm v/u: .266 ϕ : 3.6° T: 287.3 K



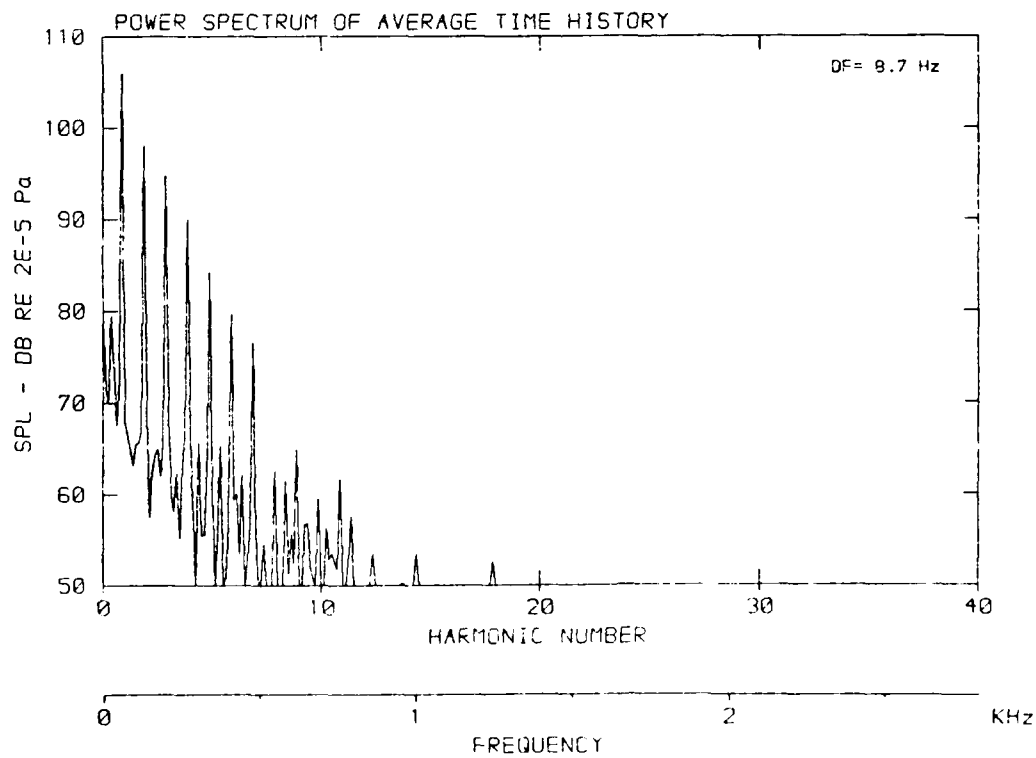
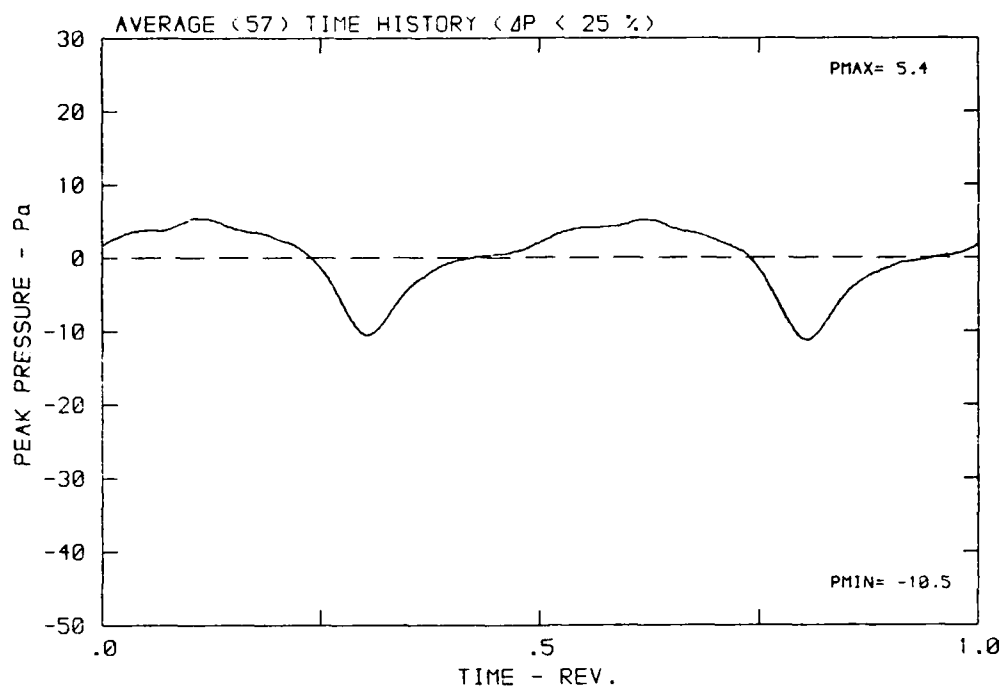
DATA POINT: FN-5 RUN: 170 MP: 1

β : 23.7° MH: .6739 n: 2100 rpm v/u: .231 ϕ : 3.6° T: 288.0 K



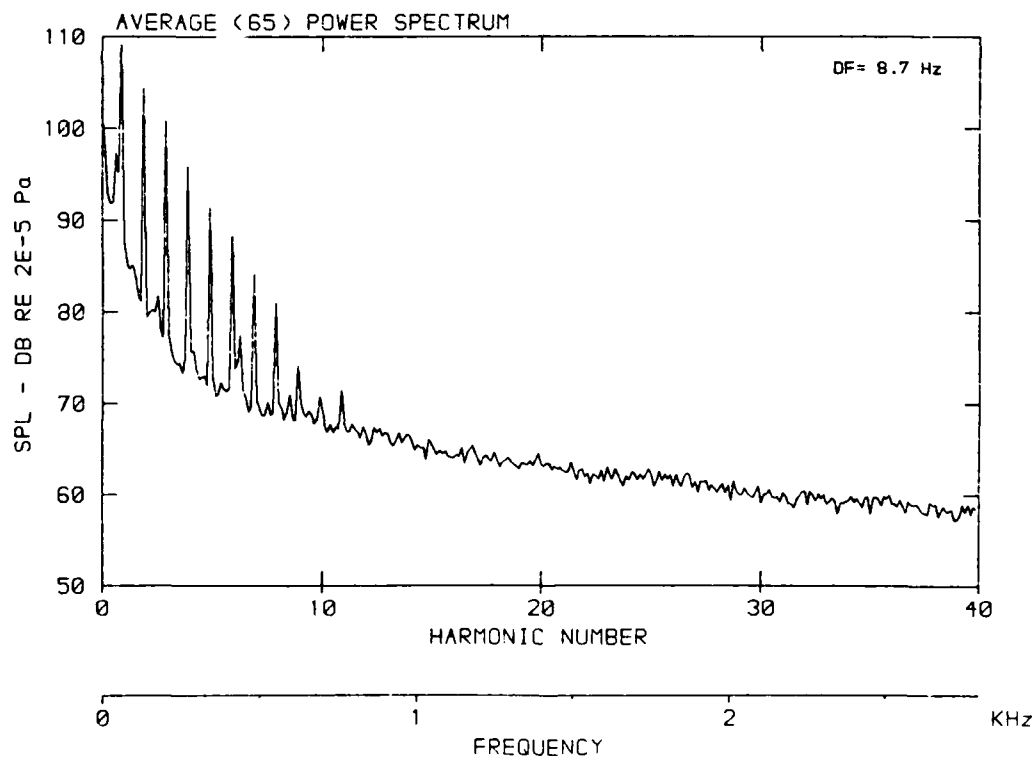
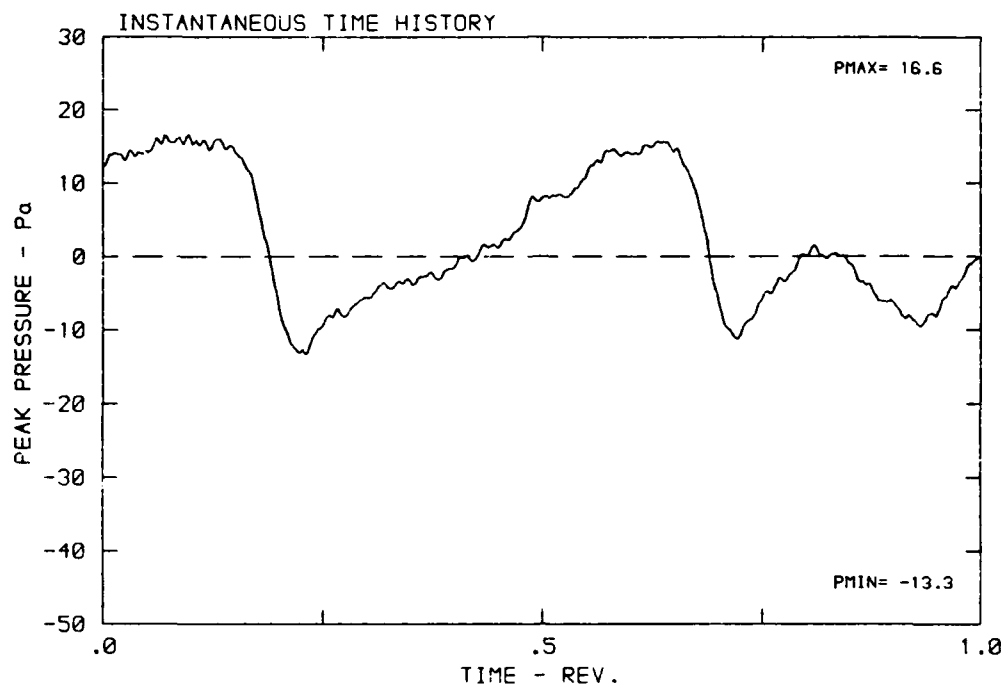
DATA POINT: FN-5 RUN: 170 MP: 1

β : 23.7° MH: .6739 n: 2100 rpm v/u: .231 ϕ : 3.6° T: 288.0 K



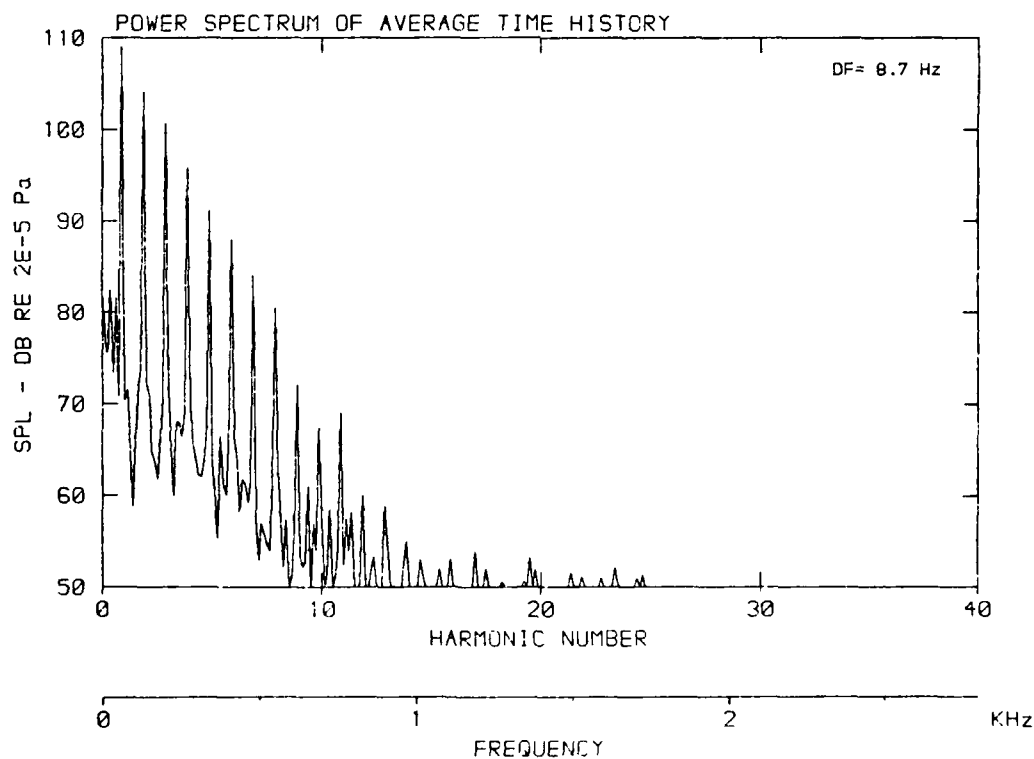
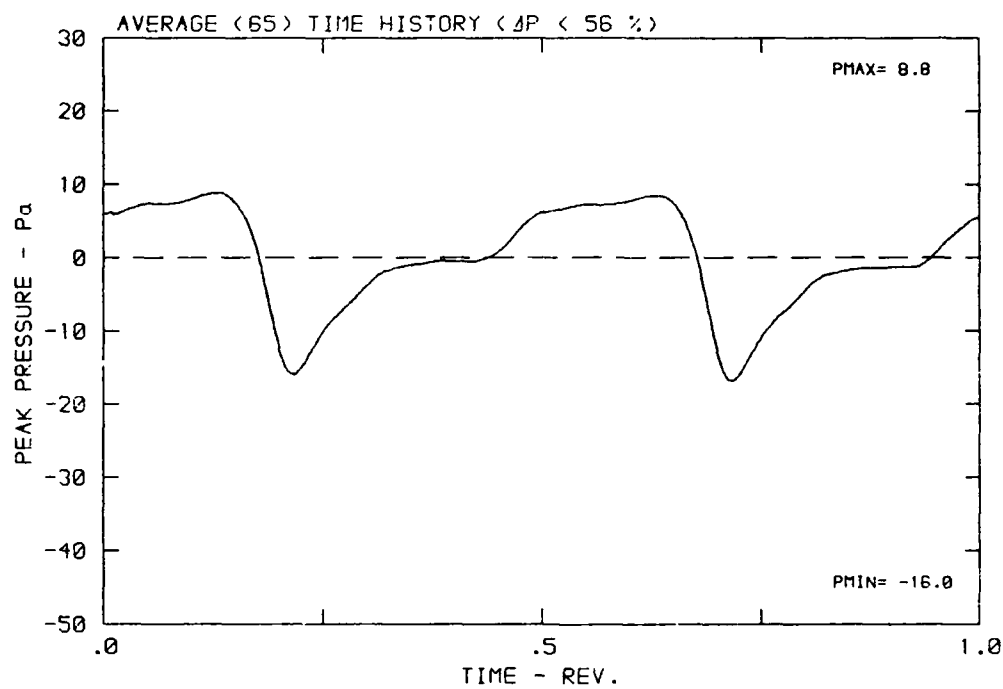
DATA POINT: FN-5 RUN: 170 MP: 2

β : 23.7° MH: .6739 n: 2100 rpm v/u: .231 ϕ : 3.6° T: 288.0 K



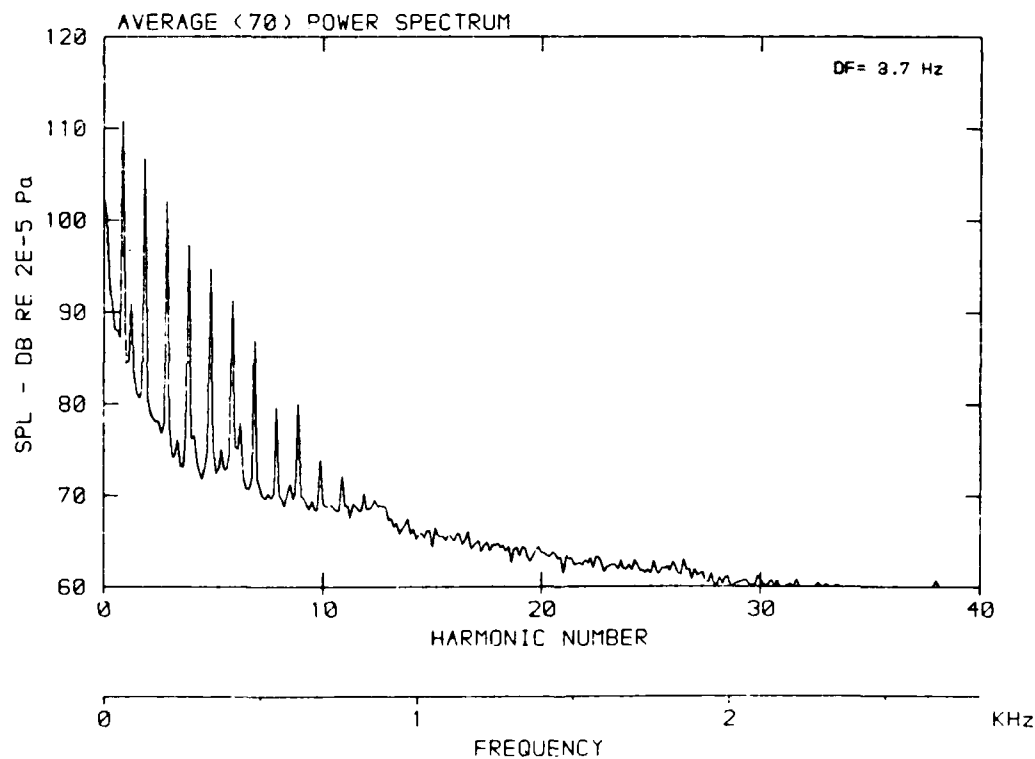
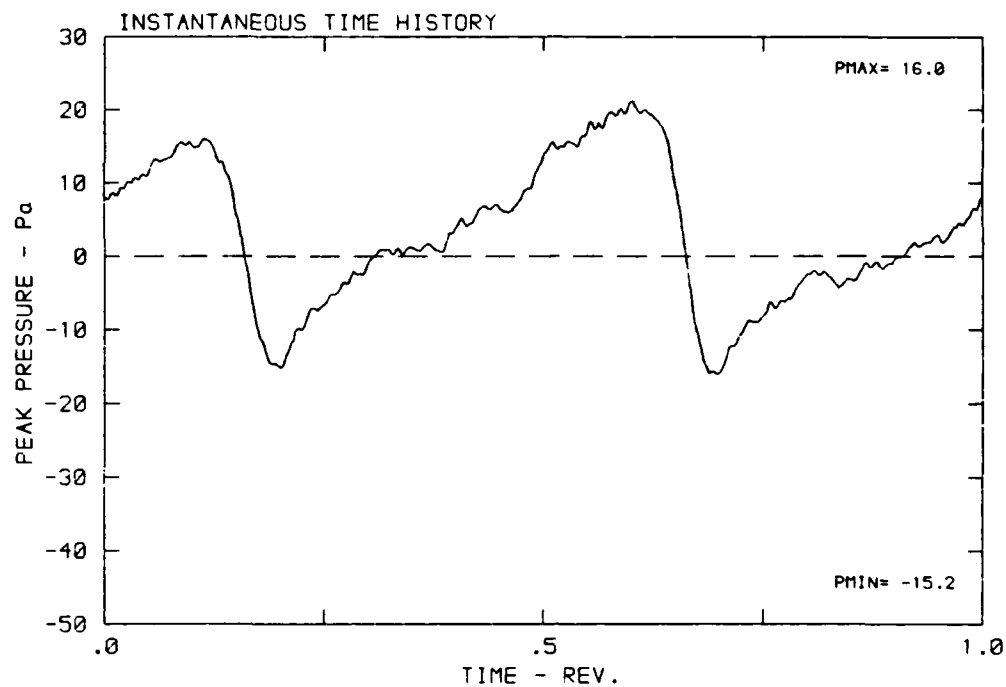
DATA POINT: FN-5 RUN: 170 MP: 2

β : 23.7° MH: .6739 n: 2100 rpm v/u: .231 ϕ : 3.6° T: 288.0 K



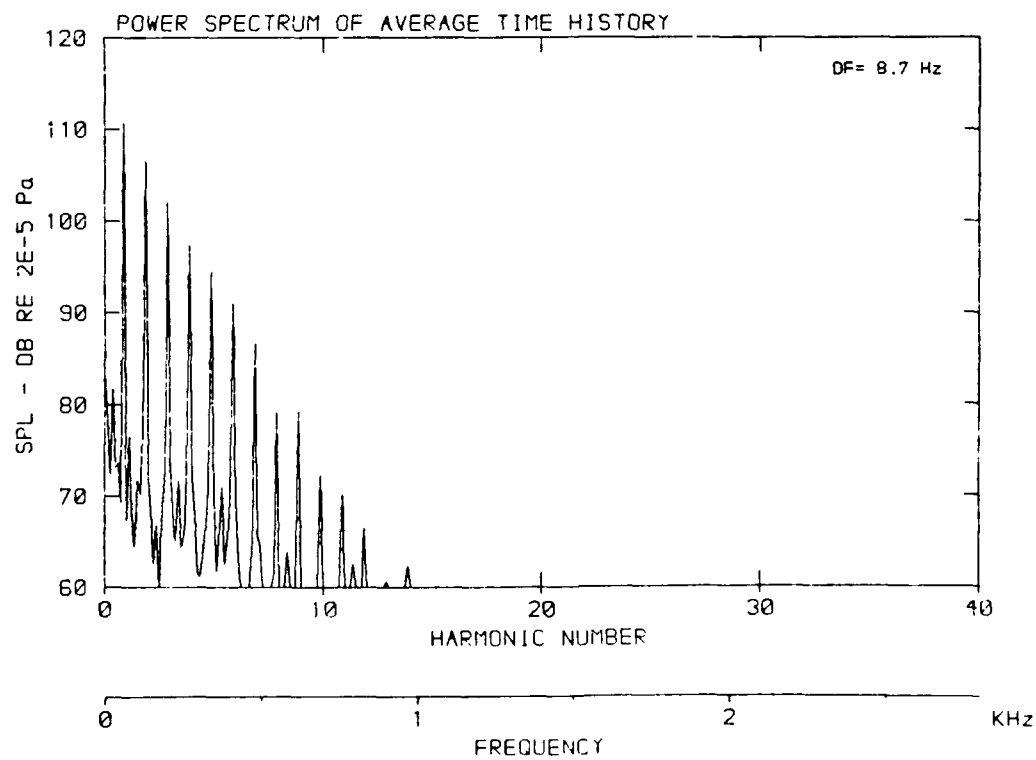
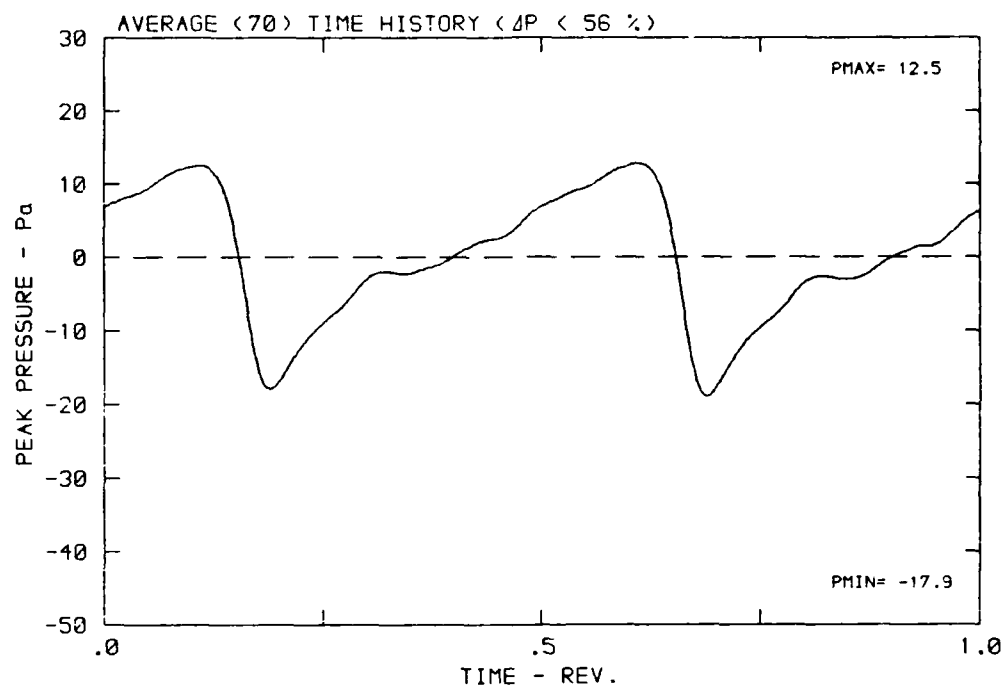
DATA POINT: FN-5 RUN: 170 MP: 3

β : 23.7° MH: .6739 n: 2100 rpm v/u: .231 ϕ : 3.6° T: 288.0 K



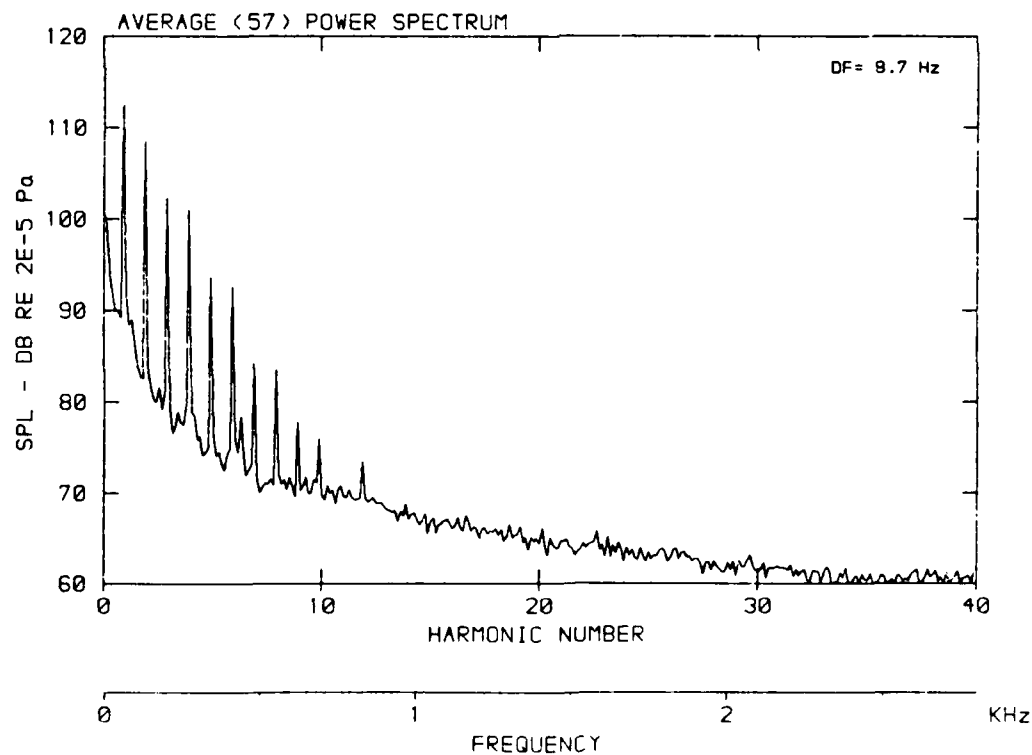
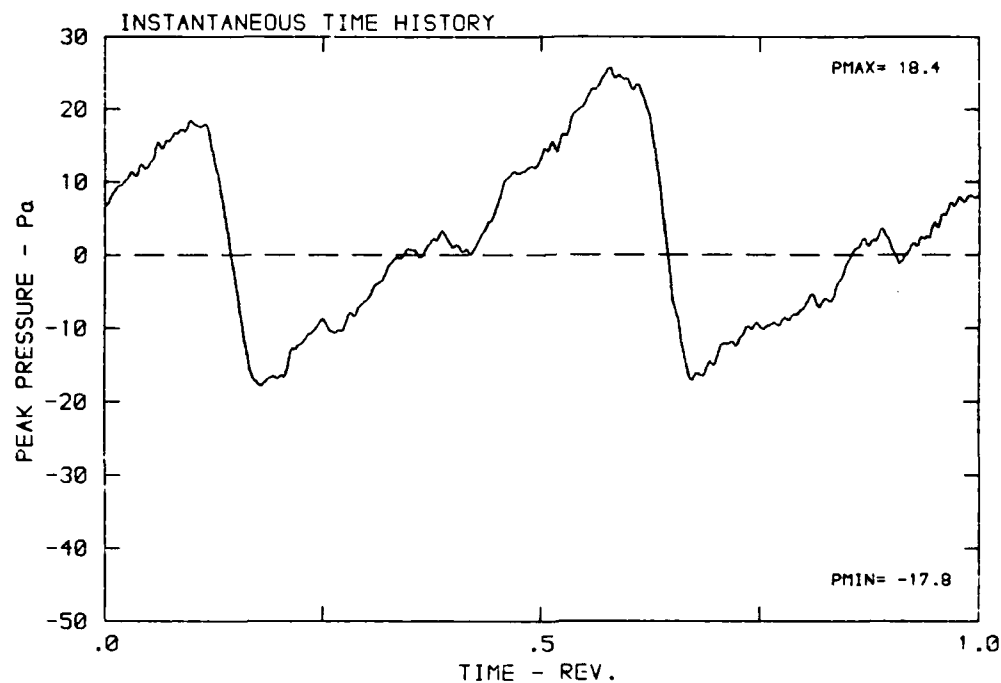
DATA POINT: FN-5 RUN: 170 MP: 3

β : 23.7° MH: .6739 n: 2100 rpm v/u: .231 ϕ : 3.6° T: 288.0 K



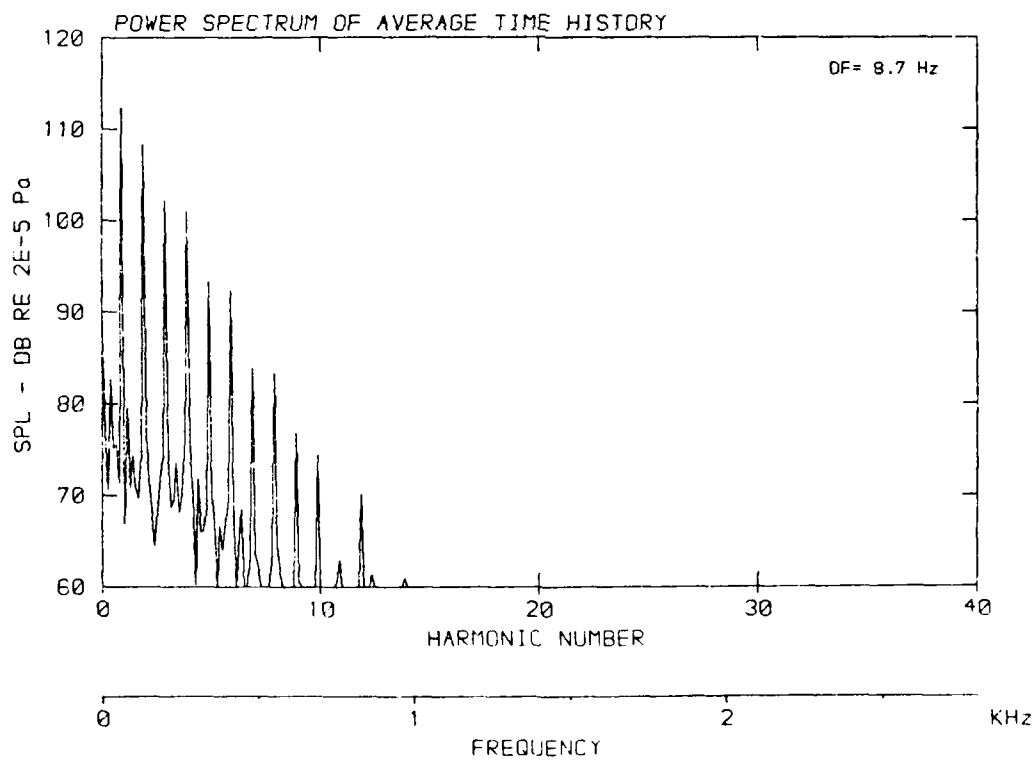
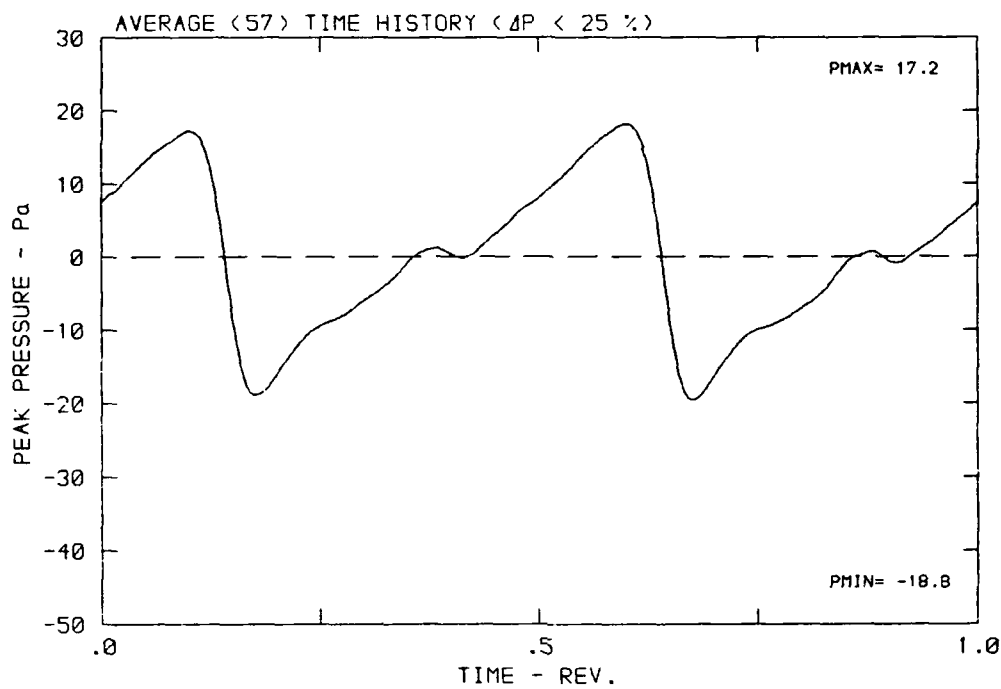
DATA POINT: FN-5 RUN: 170 MP: 4

β : 23.7° MH: .6739 n: 2100 rpm v/u: .231 ϕ : 3.6° T: 288.0 K



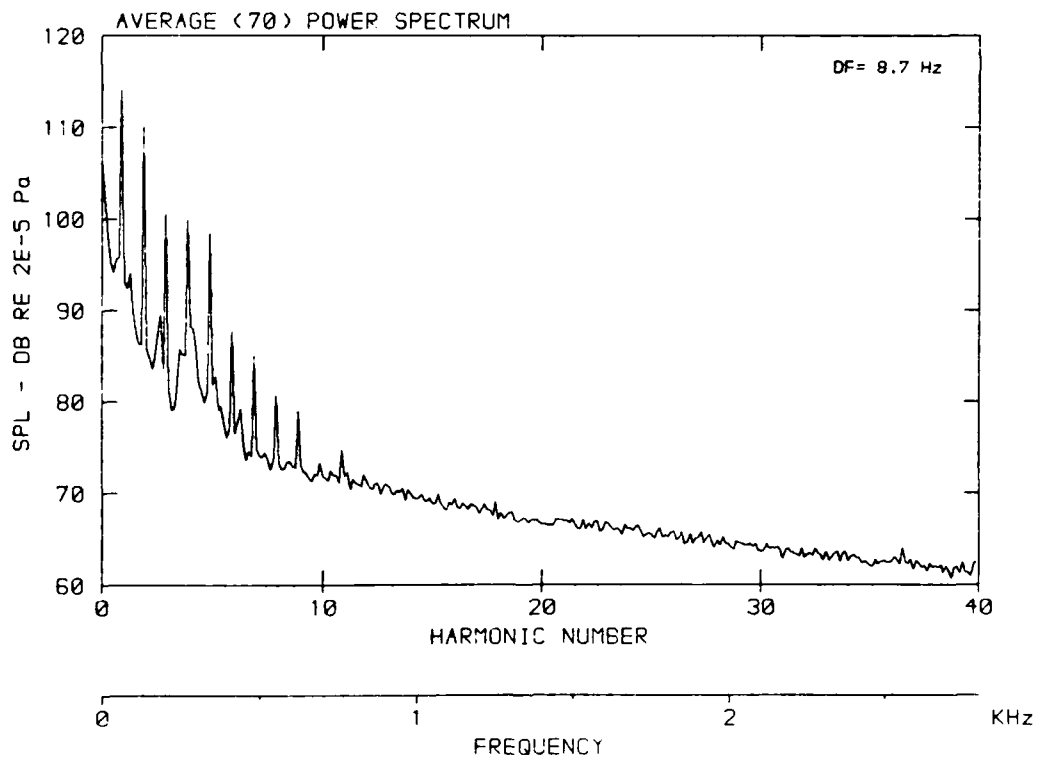
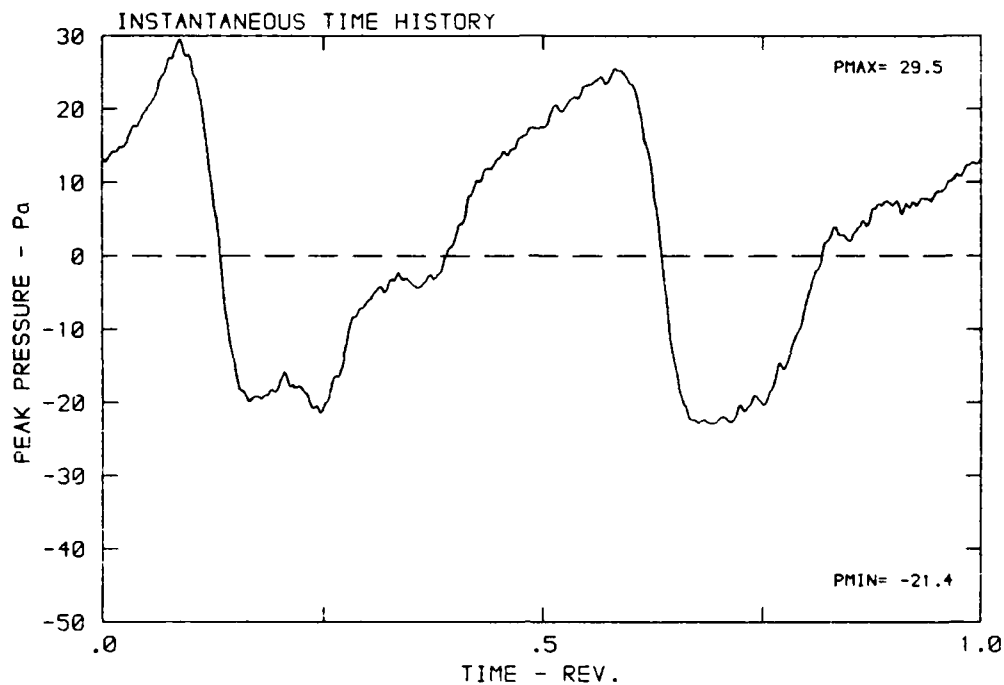
DATA POINT: FN-5 RUN: 170 MP: 4

β : 23.7° MH: .6739 n: 2100 rpm v/u: .231 ϕ : 3.6° T: 288.0 K



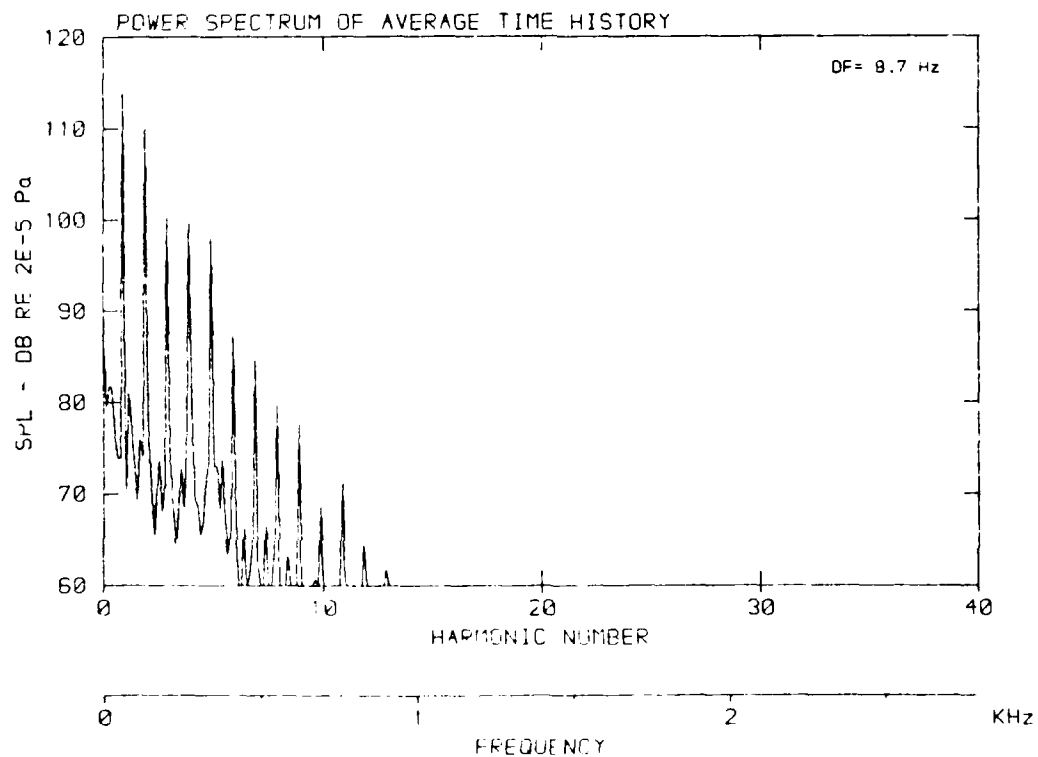
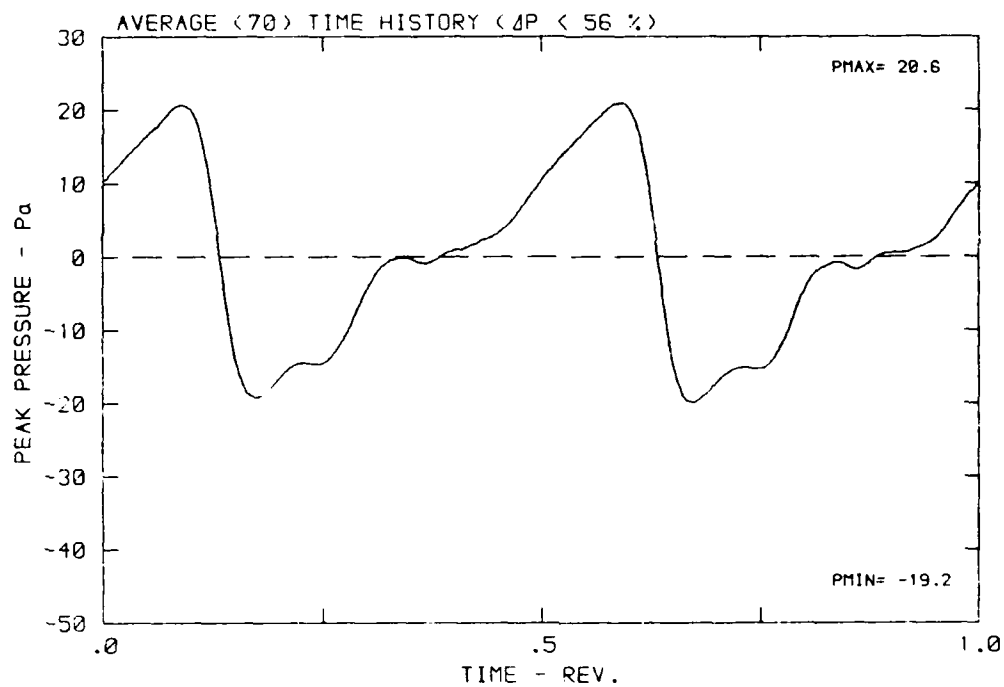
DATA POINT: FN-5 RUN: 170 MP: 5

β : 23.7° MH: .6739 n: 2100 rpm v/u : .231 ϕ : 3.6° T: 288.0 K



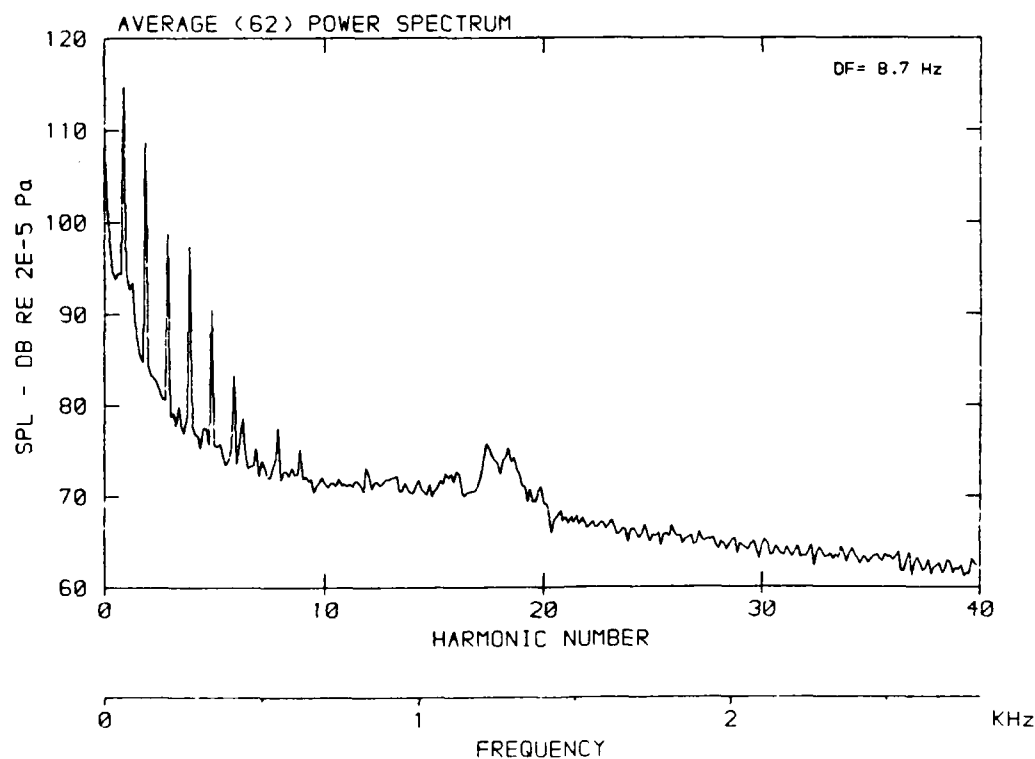
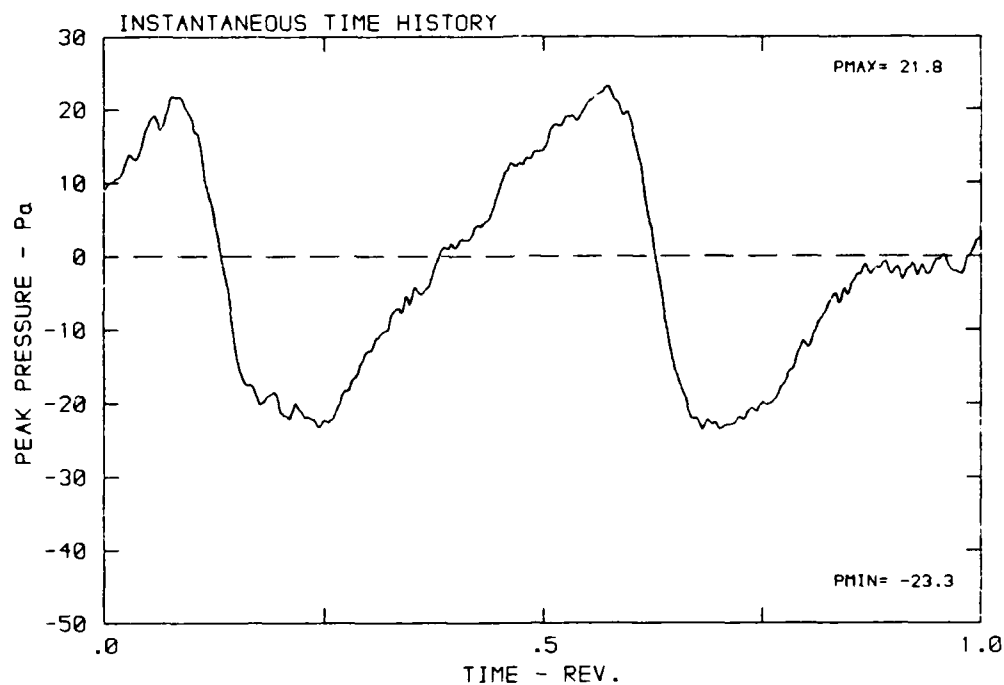
DATA POINT: FN-5 RUN: 170 MP: 5

β : 23.7° MH: .6739 n: 2100 rpm v/u: .231 ϕ : 3.6° T: 288.0 K



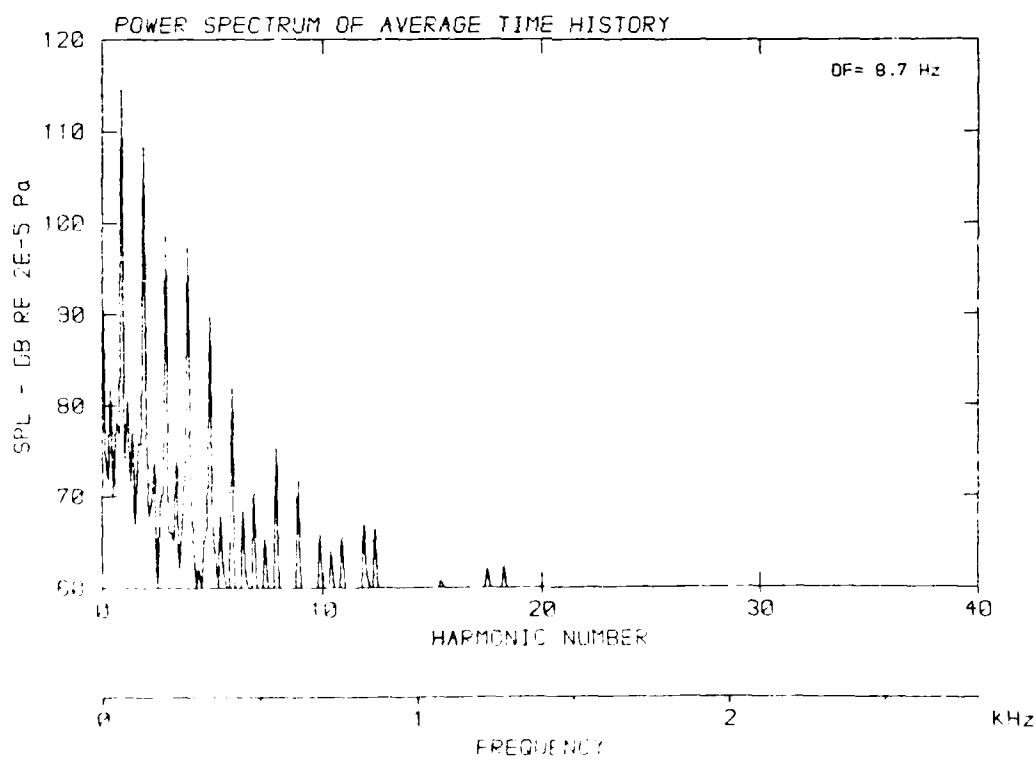
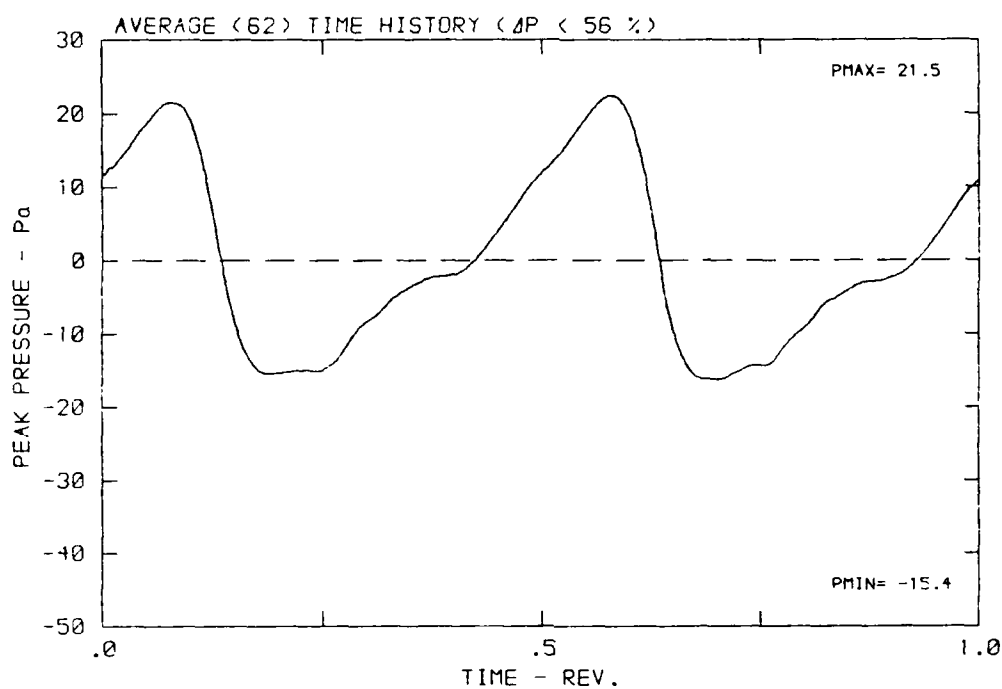
DATA POINT: FN-5 RUN: 170 MP: 6

β : 23.7° MH: .6739 n: 2100 rpm v/u: .231 ϕ : 3.6° T: 288.0 K



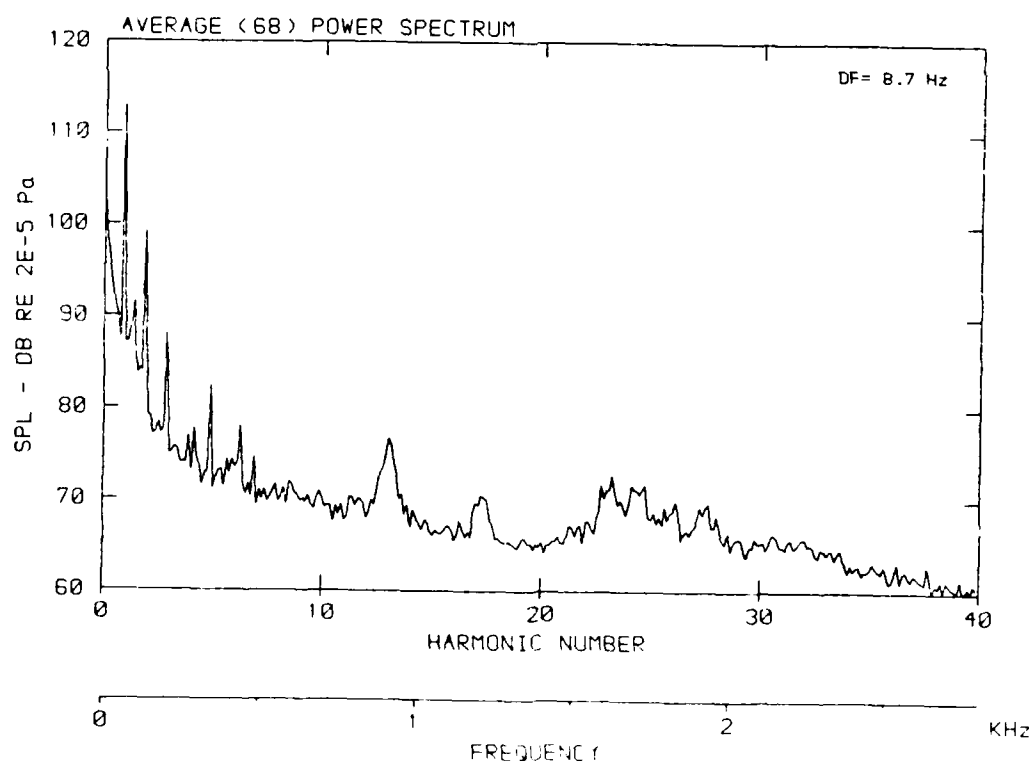
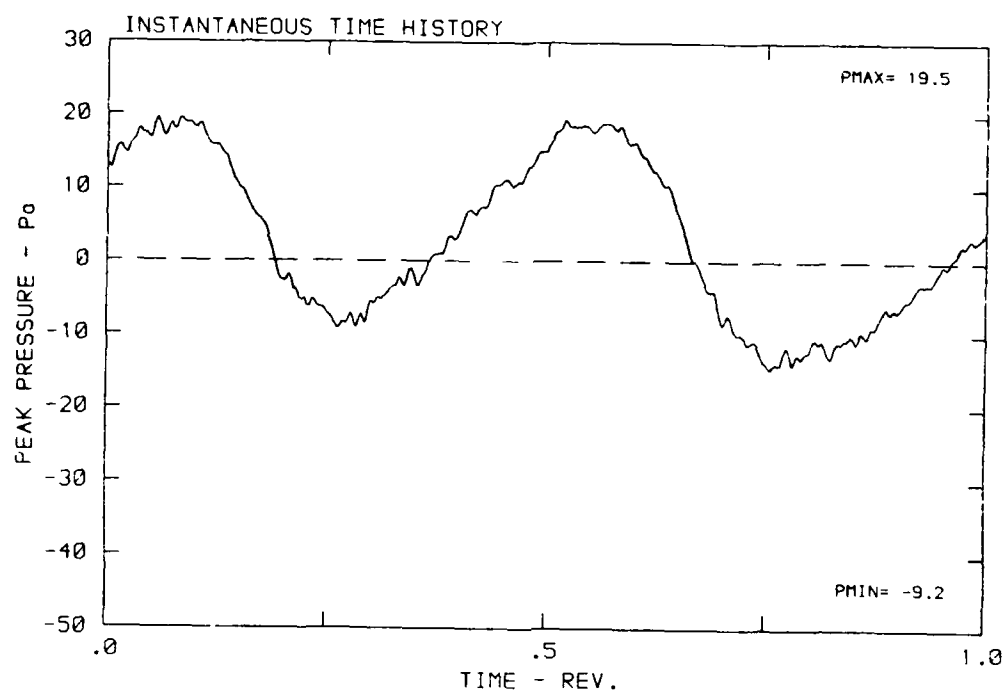
DATA POINT: FN-5 RUN: 170 MP: 6

β : 23.7° MH: .6739 n: 2100 rpm v/u : .231 ϕ : 3.6° T: 288.0 K



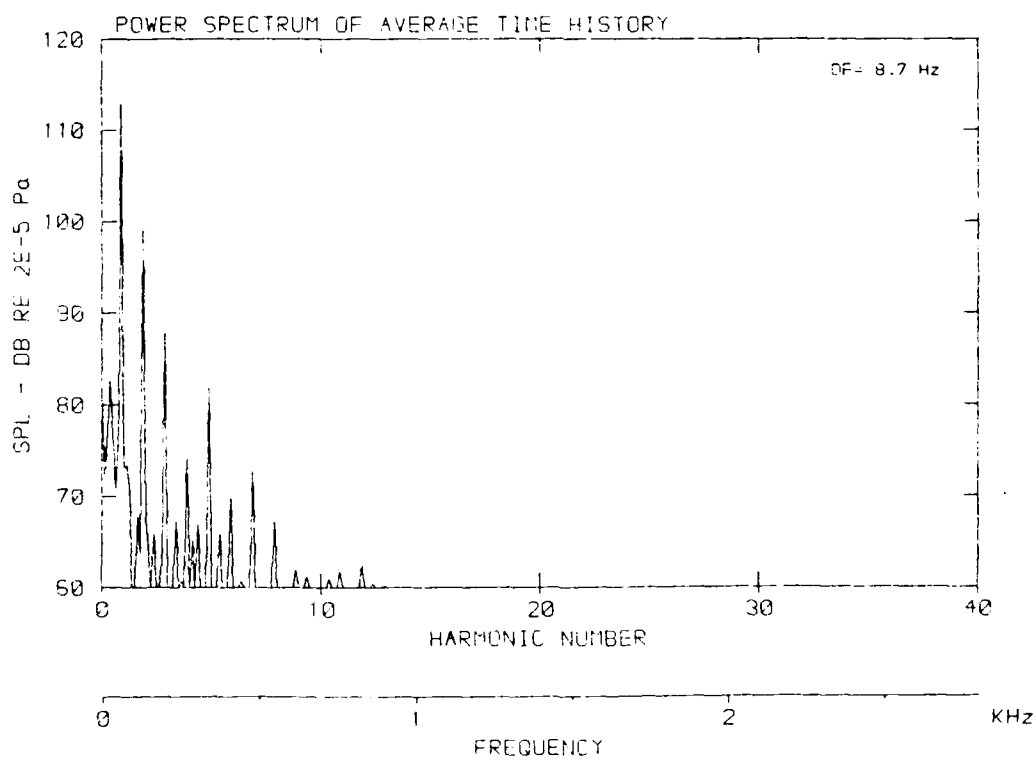
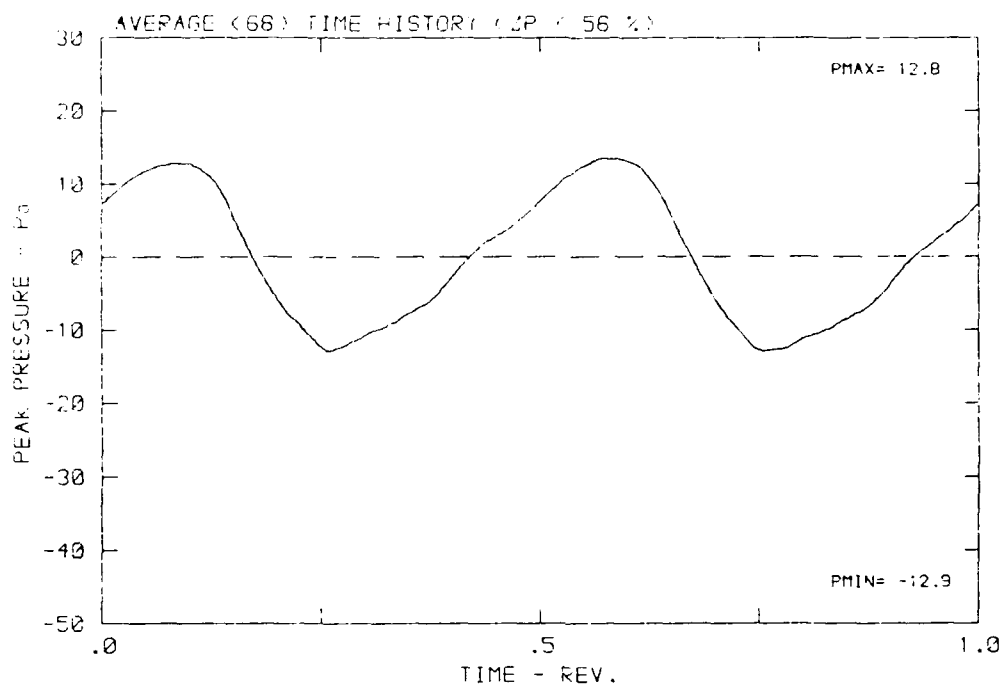
DATA POINT: FN-5 RUN: 170 MP: 7

β : 23.7° MH: .6739 n: 2100 rpm v/u: .231 ϕ : 3.6° T: 288.0 K



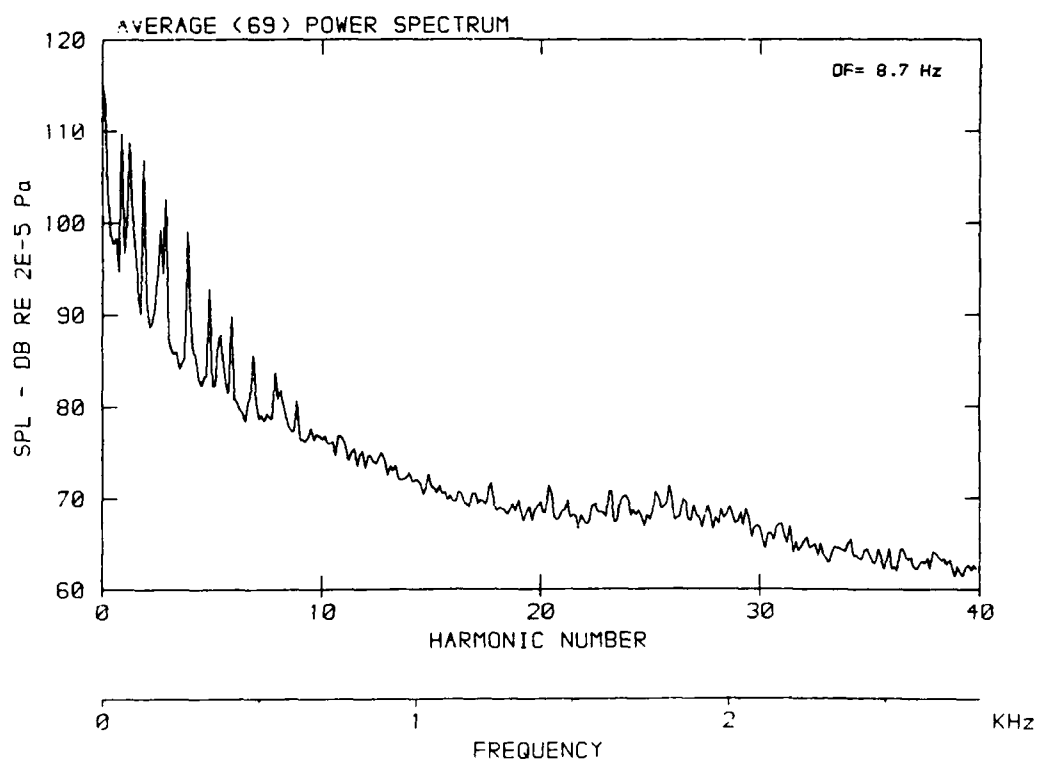
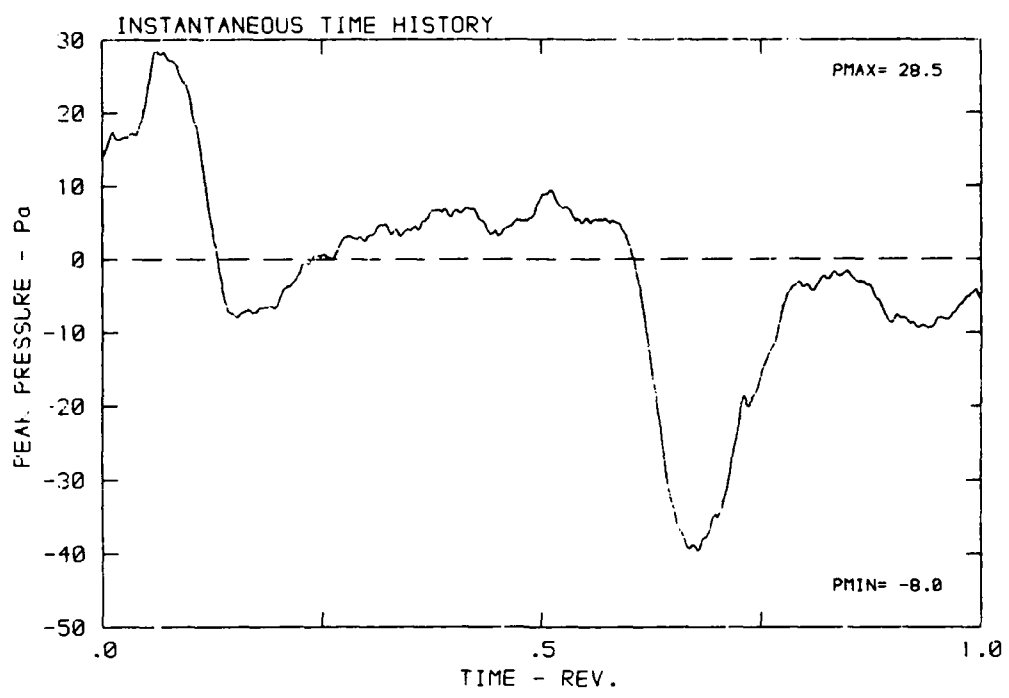
DATA POINT: FN-5 RUN: 170 MP: 7

β : 23.7° MH: .6739 n: 2100 rpm v/u : .231 ϕ : 3.6° T: 288.0 K



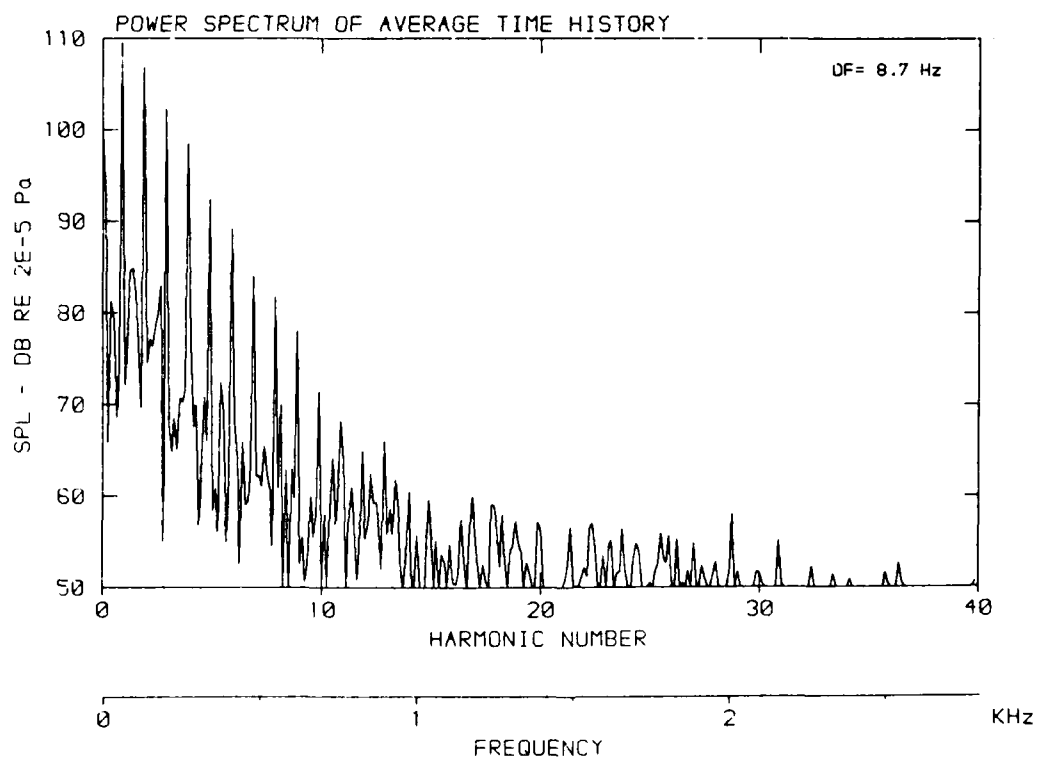
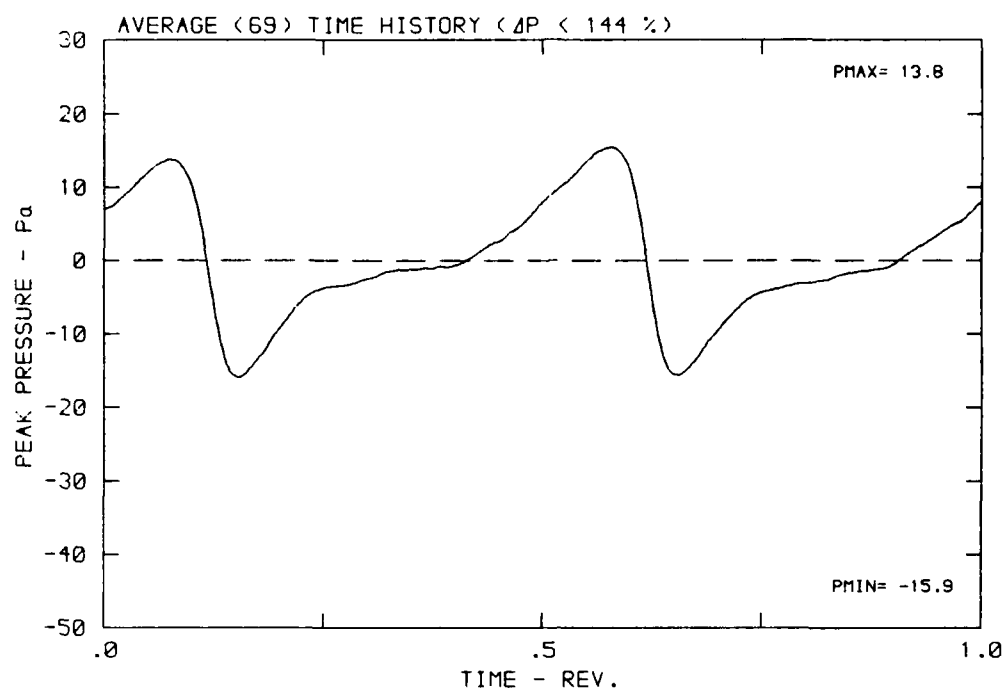
DATA POINT: FN-5 RUN: 170 MP: 8

β : 23.7° MH: .6739 n: 2100 rpm v/u: .231 ϕ : 3.6° T: 288.0 K



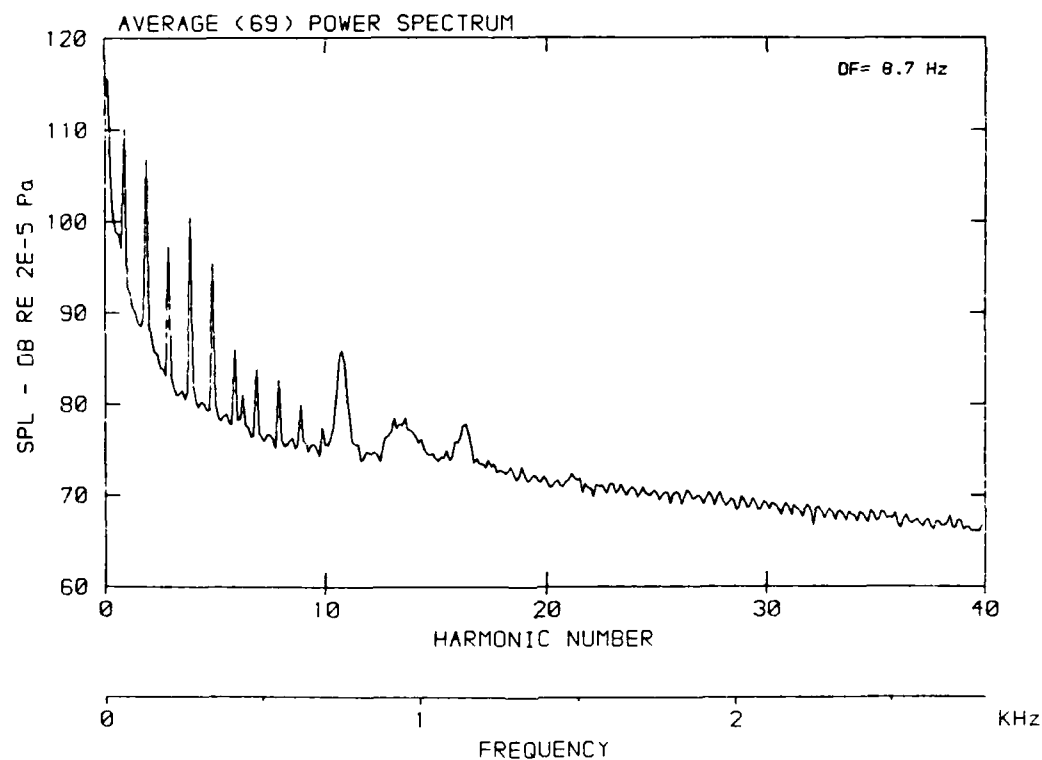
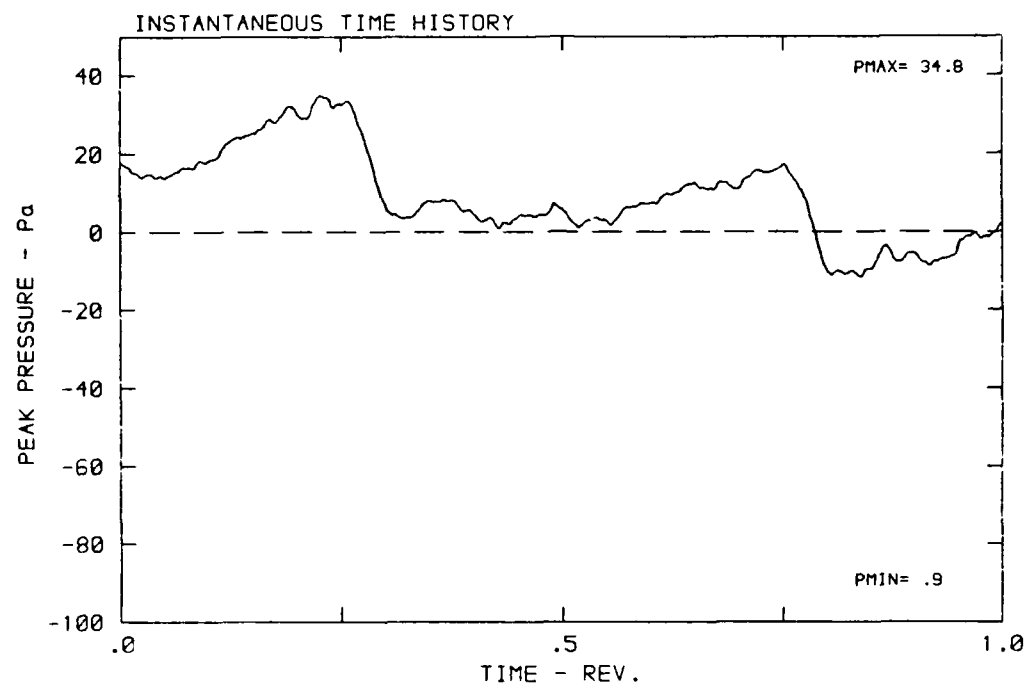
DATA POINT: FN-5 RUN: 170 MP: 8

β : 23.7° MH: .6739 n: 2100 rpm v/u: .231 ϕ : 3.6° T: 288.0 K



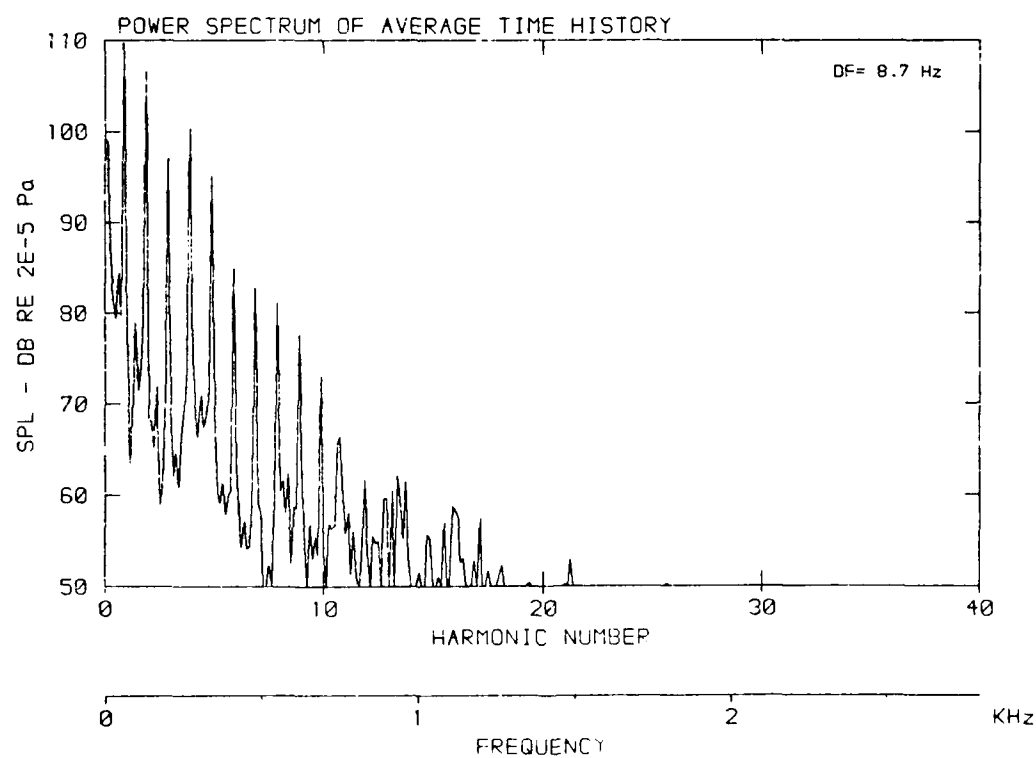
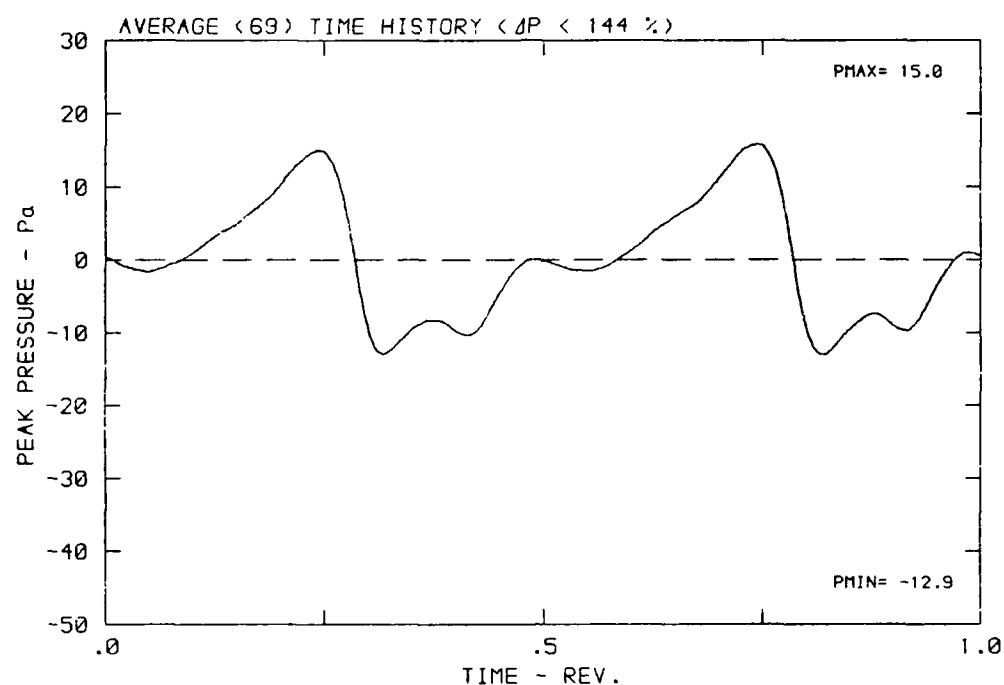
DATA POINT: FN-5 RUN: 170 MP: 9

β : 23.7° MH: .6739 n: 2100 rpm v/u : .231 ϕ : 3.6° T: 288.0 K



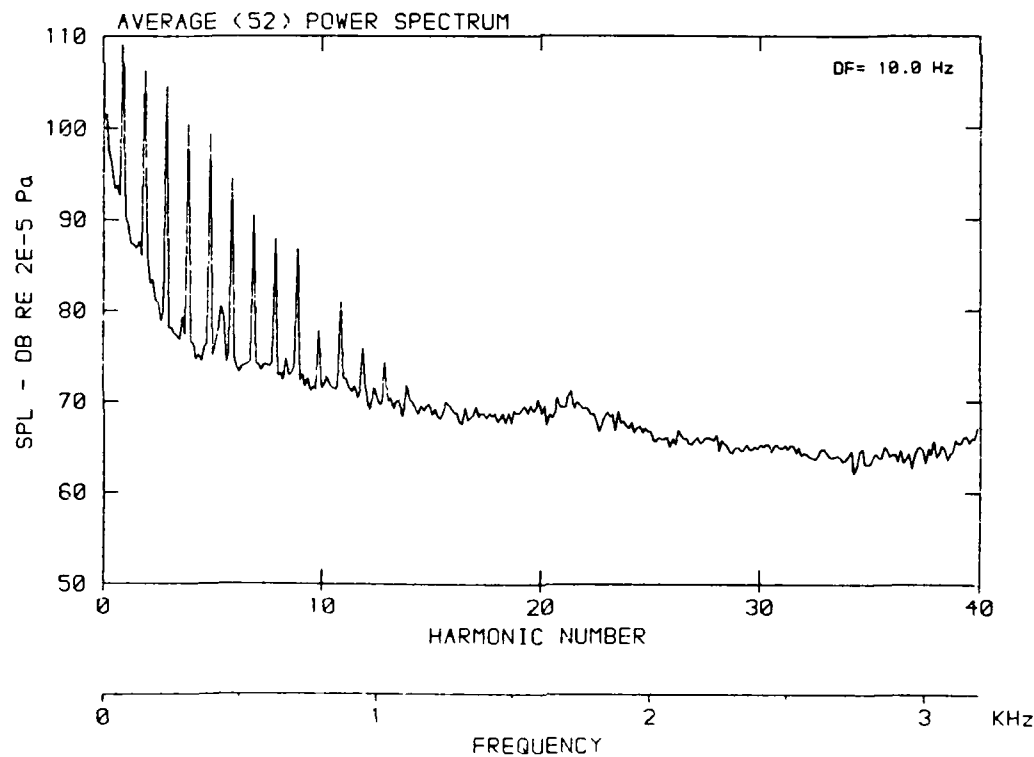
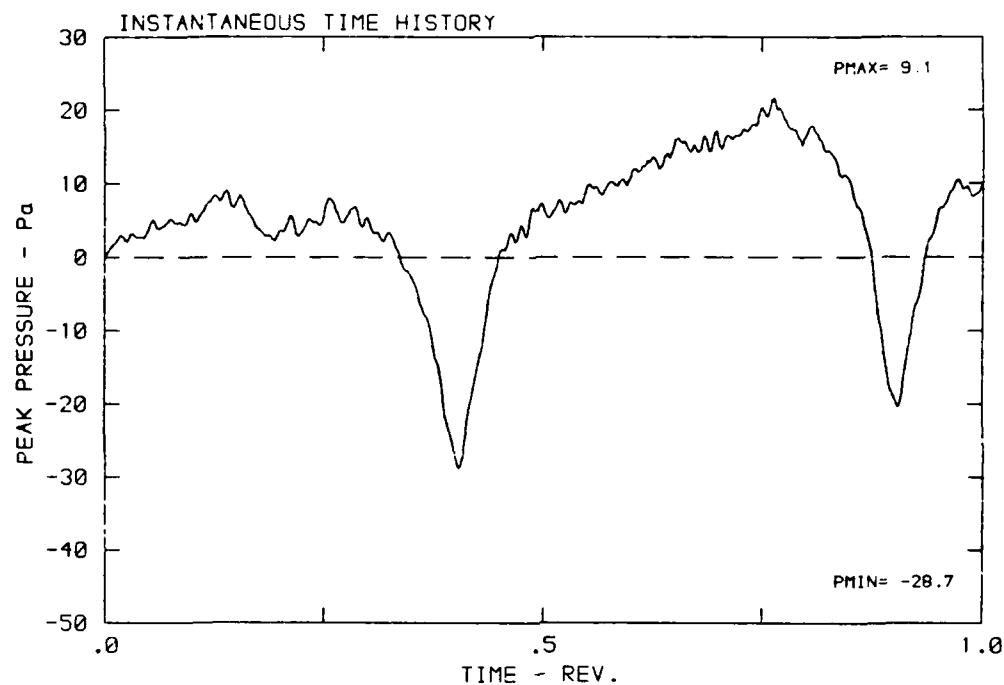
DATA POINT: FN-5 RUN: 170 MP: 9

β : 23.7° MH: .6739 n: 2100 rpm v/u : .231 ϕ : 3.6° T: 288.0 K



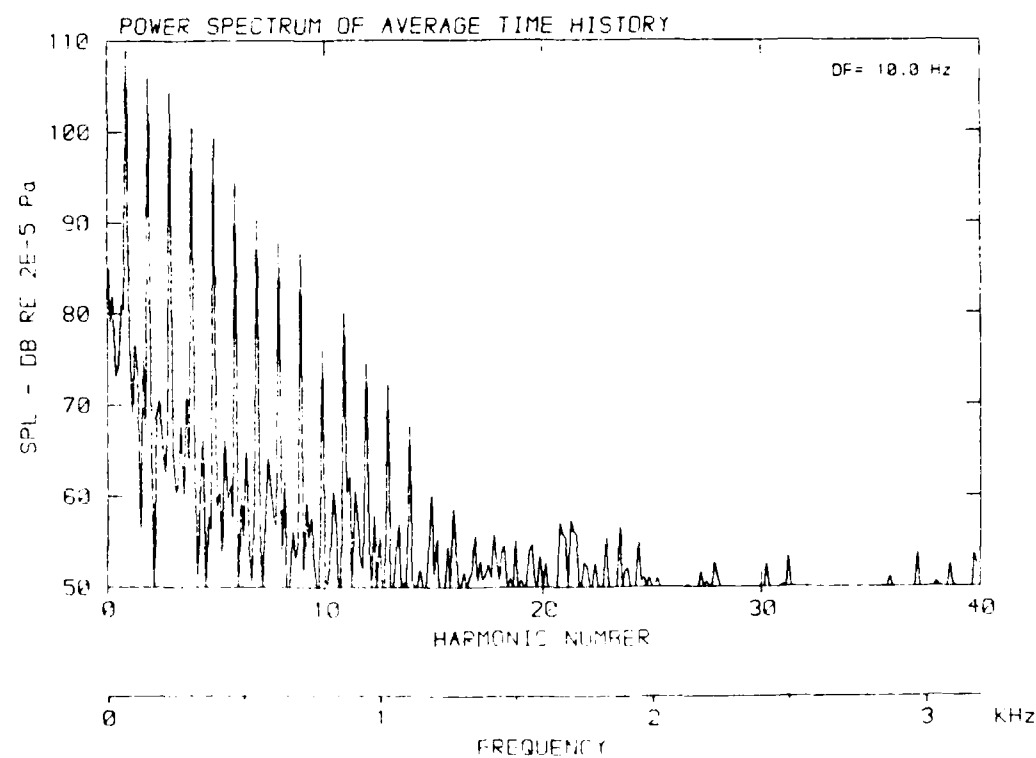
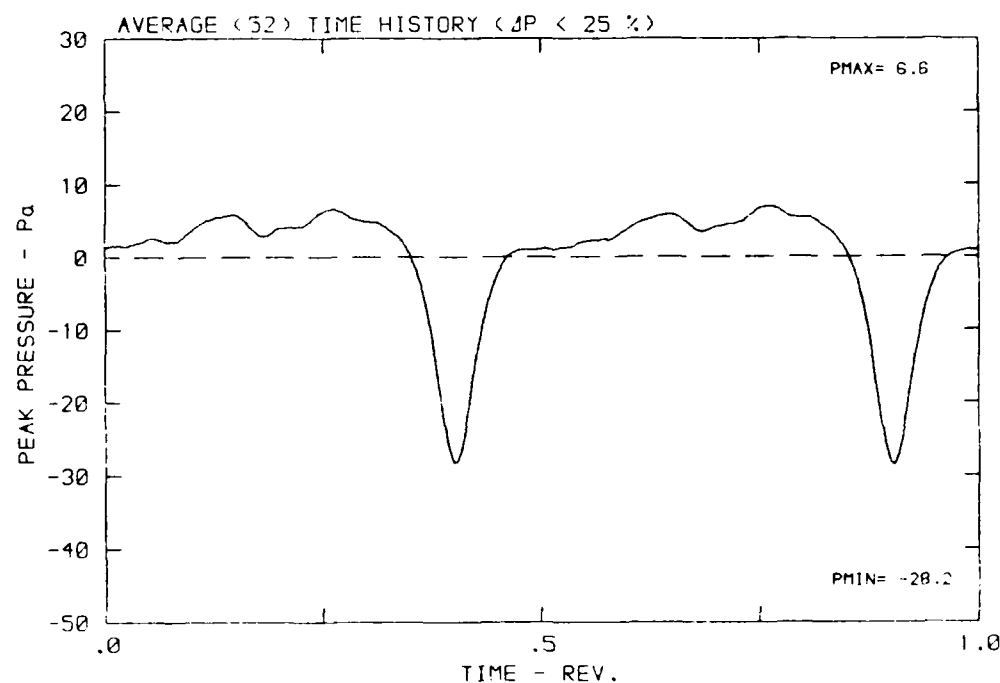
DATA POINT: FN-6 RUN: 171 MP: 1

β : 23.7° MH: .7756 n: 2400 rpm v/u: .264 ϕ : 3.6° T: 288.4 K



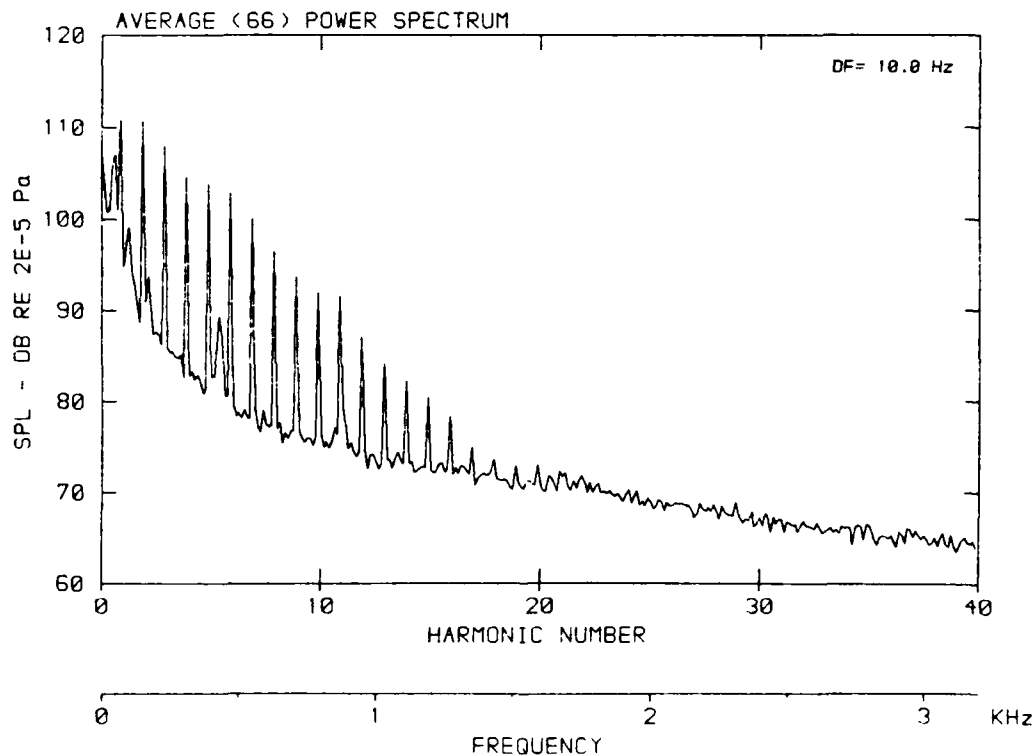
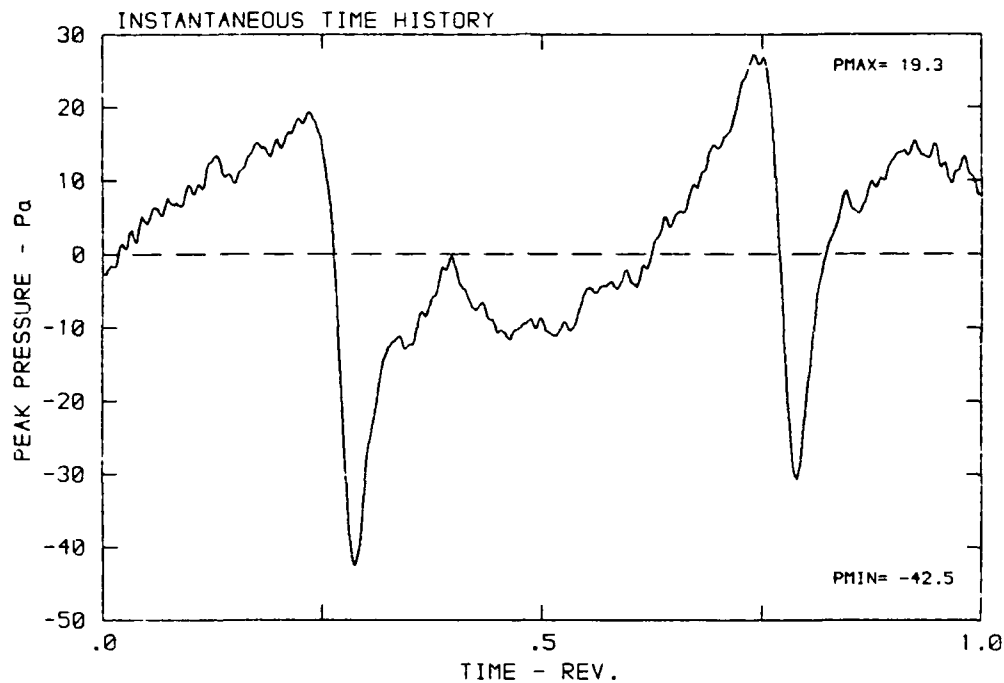
DATA POINT: FN-6 RUN: 171 MP: 1

β : 23.7° MH: .7756 n: 2400 rpm v/u: .264 ϕ : 3.6° T: 288.4 K



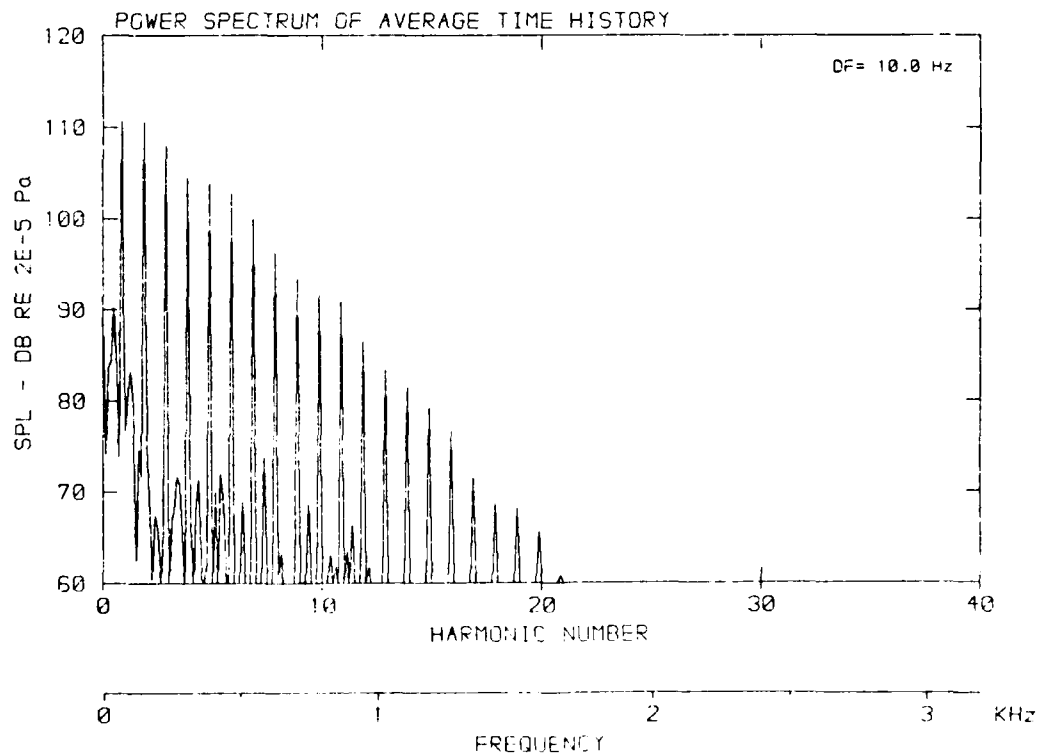
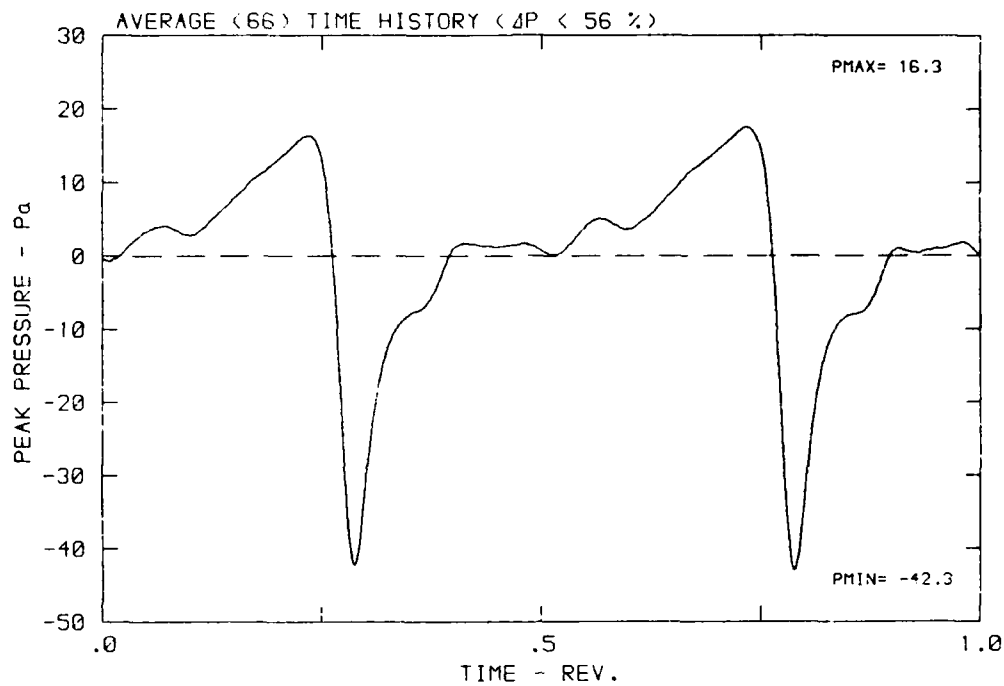
DATA POINT: FN-6 RUN: 171 MP: 2

β : 23.7° MH: .7756 n: 2400 rpm v/u: .264 ϕ : 3.6° T: 288.4 K



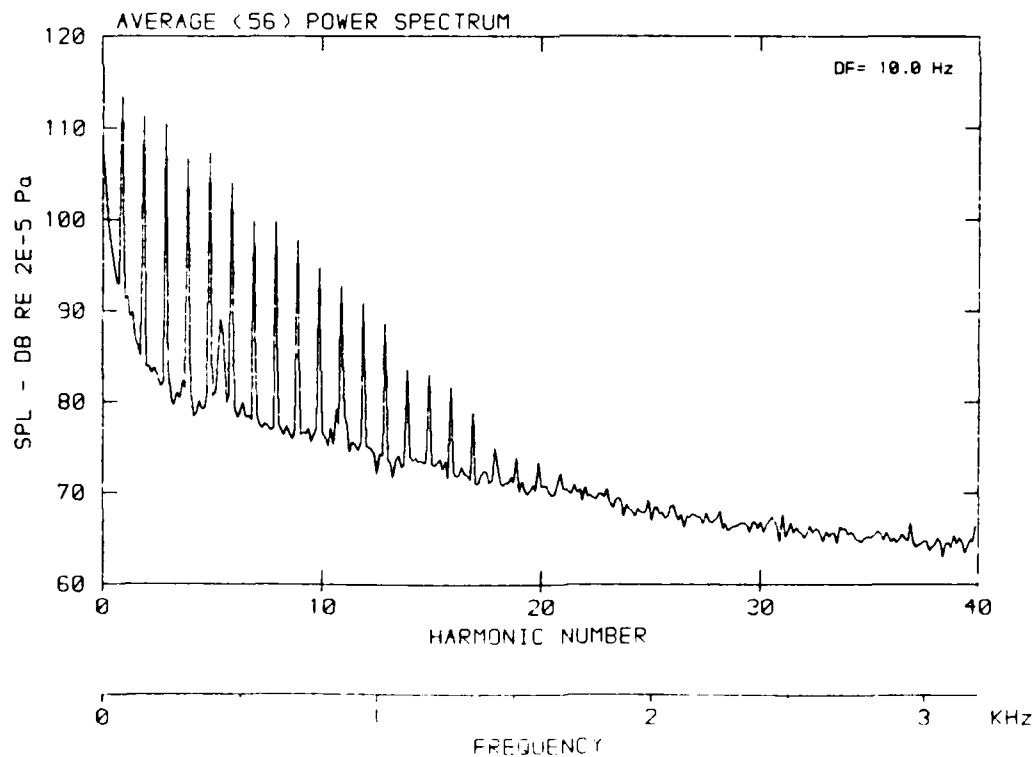
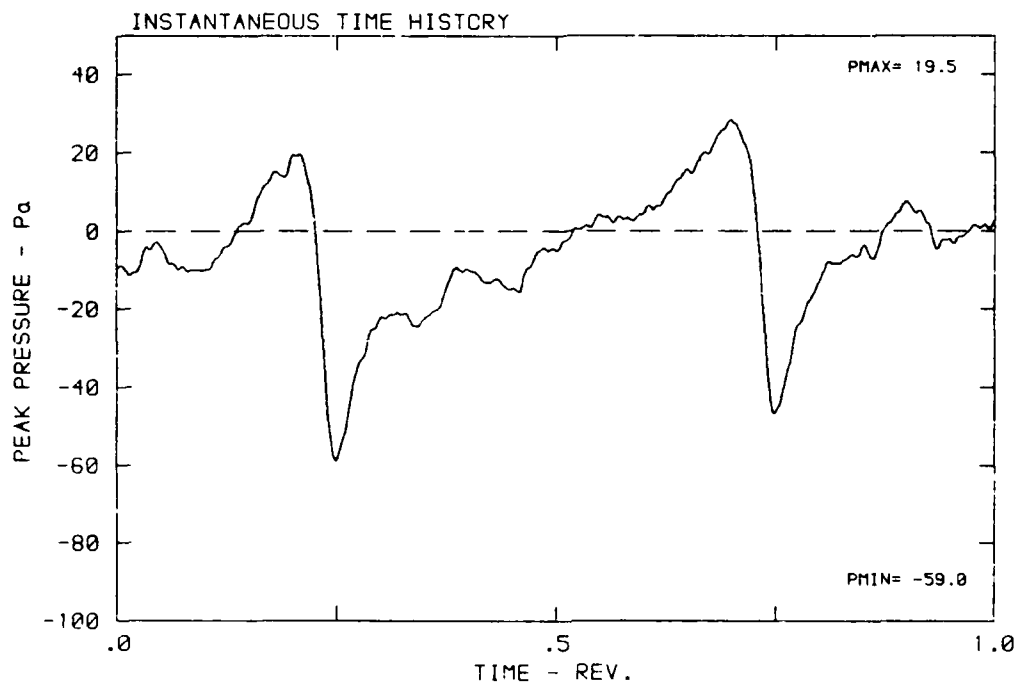
DATA POINT: FN-6 RUN: 171 MP: 2

β : 23.7° MH: .7756 n: 2400 rpm v/u: .264 ϕ : 3.6° T: 288.4 K



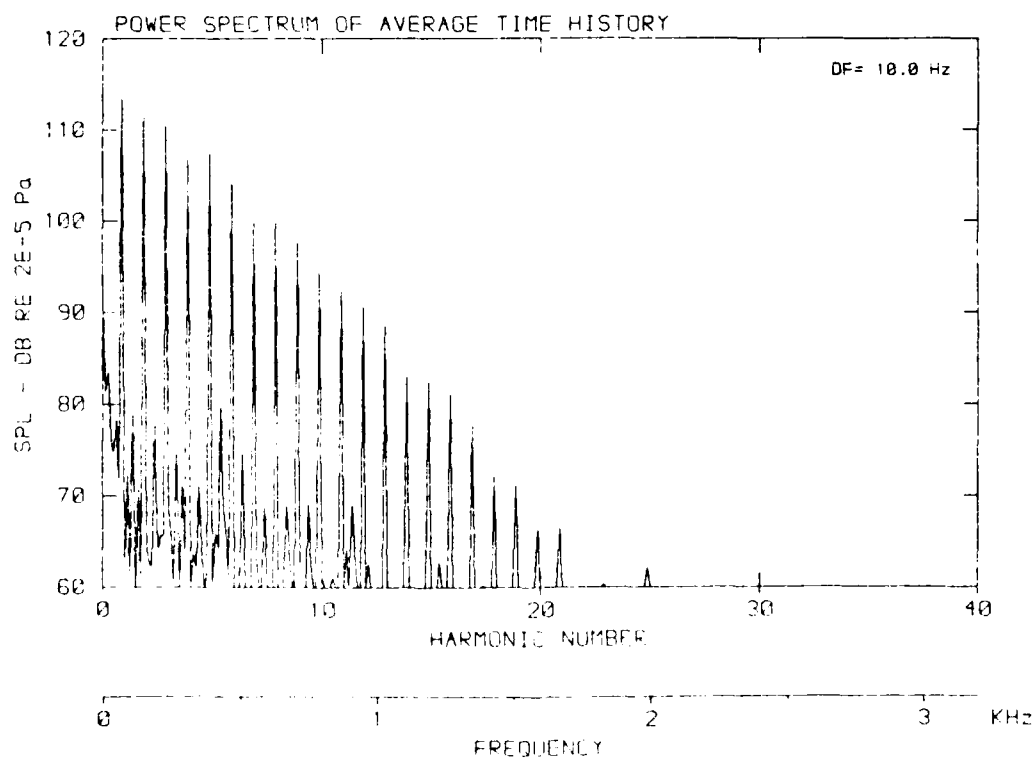
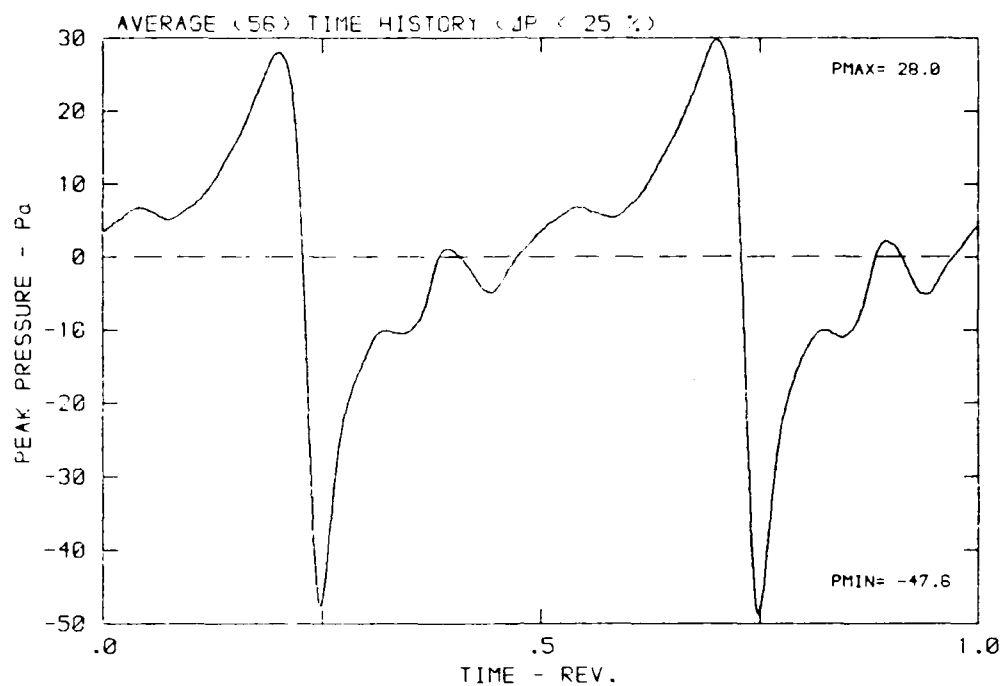
DATA POINT: FN-6 RUN: 171 MP: 3

β : 23.7° MH: .7756 n: 2400 rpm v/u: .264 ϕ : 3.6° T: 288.4 K



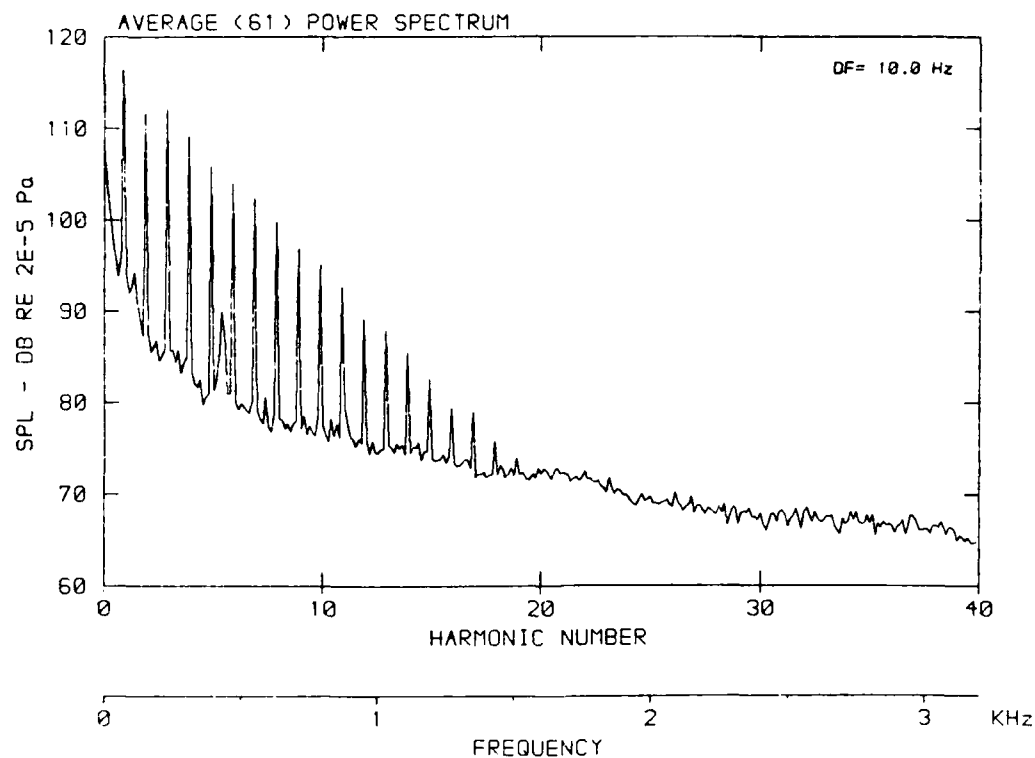
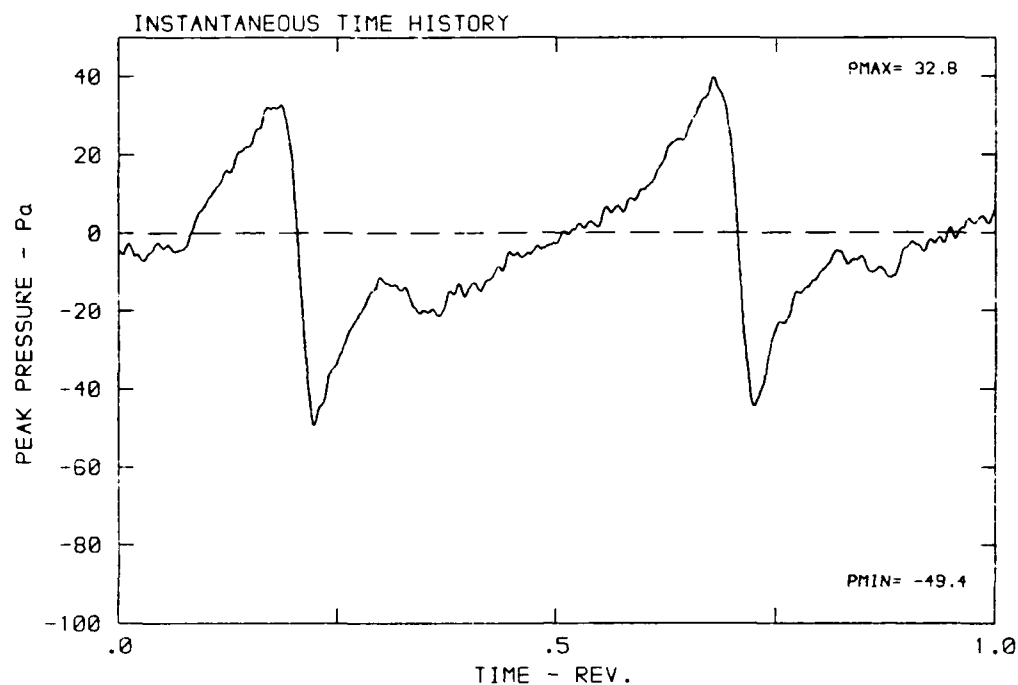
DATA POINT: FN-6 RUN: 171 MP: 3

β : 23.7° MH: .7756 n: 2400 rpm v/u : .264 ϕ : 3.6° T: 288.4 K



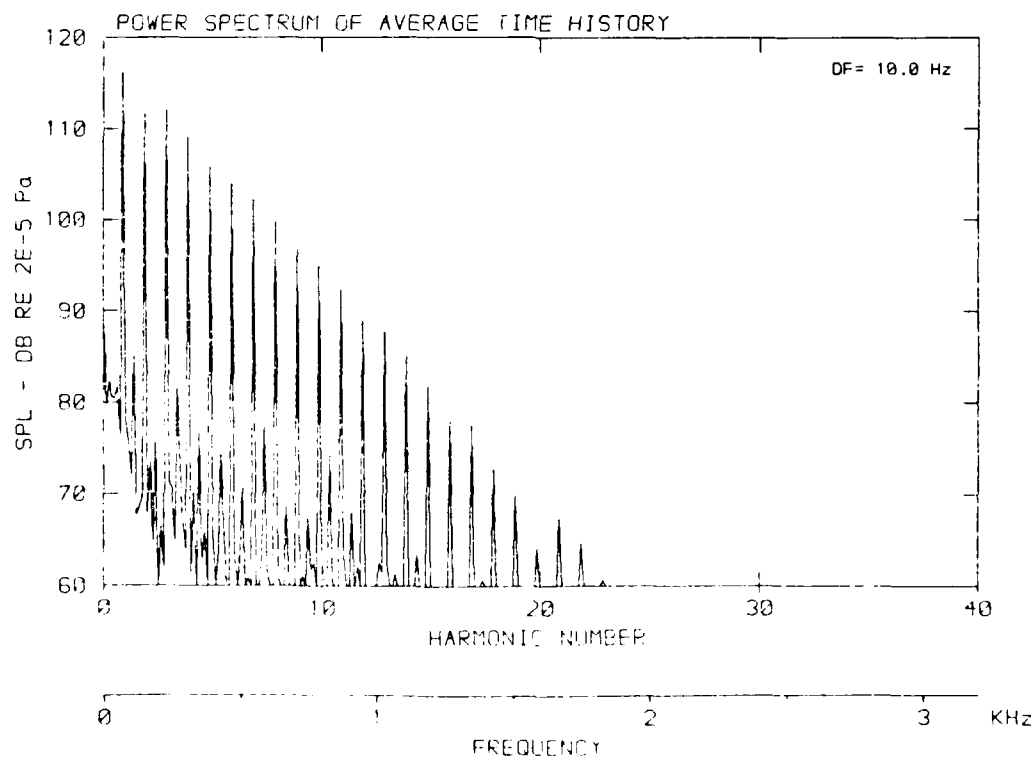
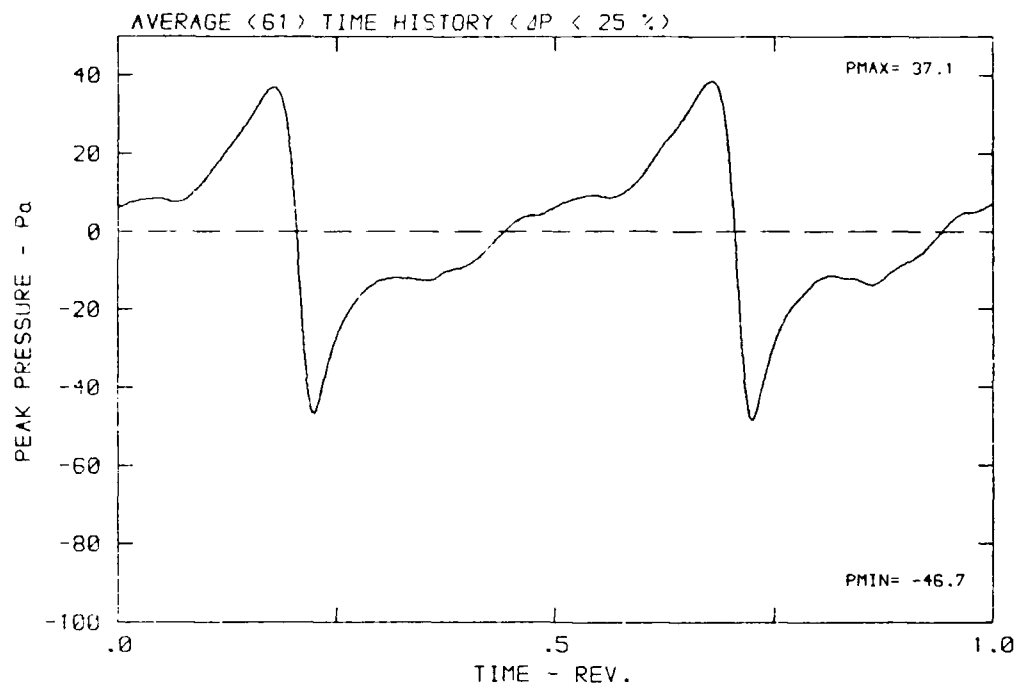
DATA POINT: FN-6 RUN: 171 MP: 4

β : 23.7° MH: .7756 n: 2400 rpm v/u: .264 ϕ : 3.6° T: 288.4 K



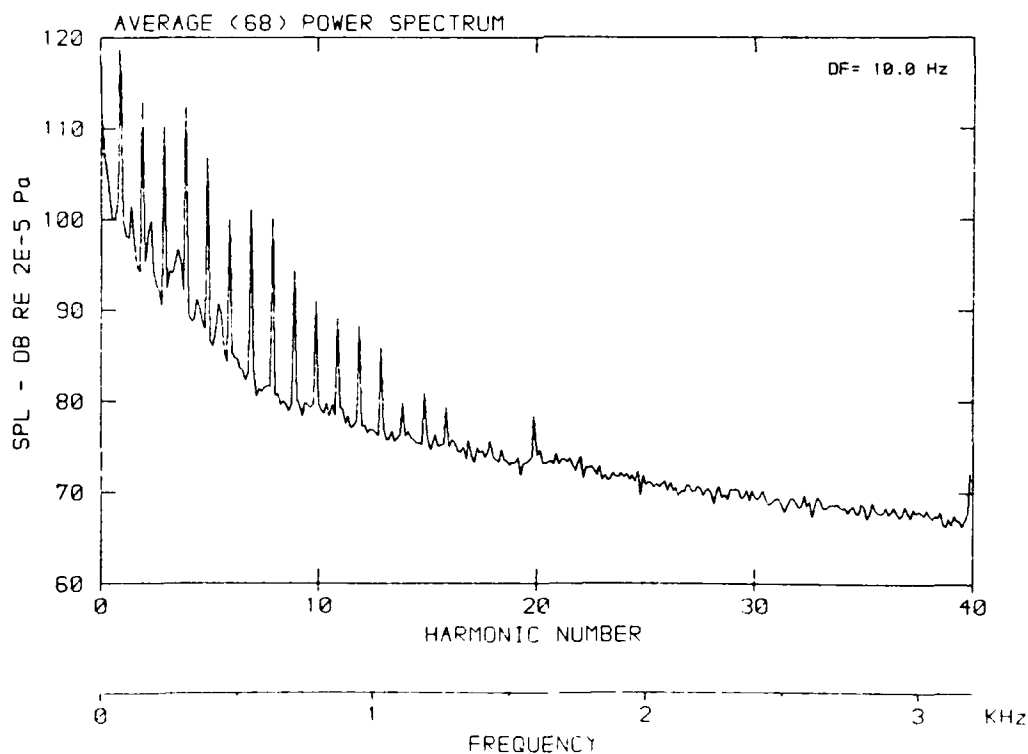
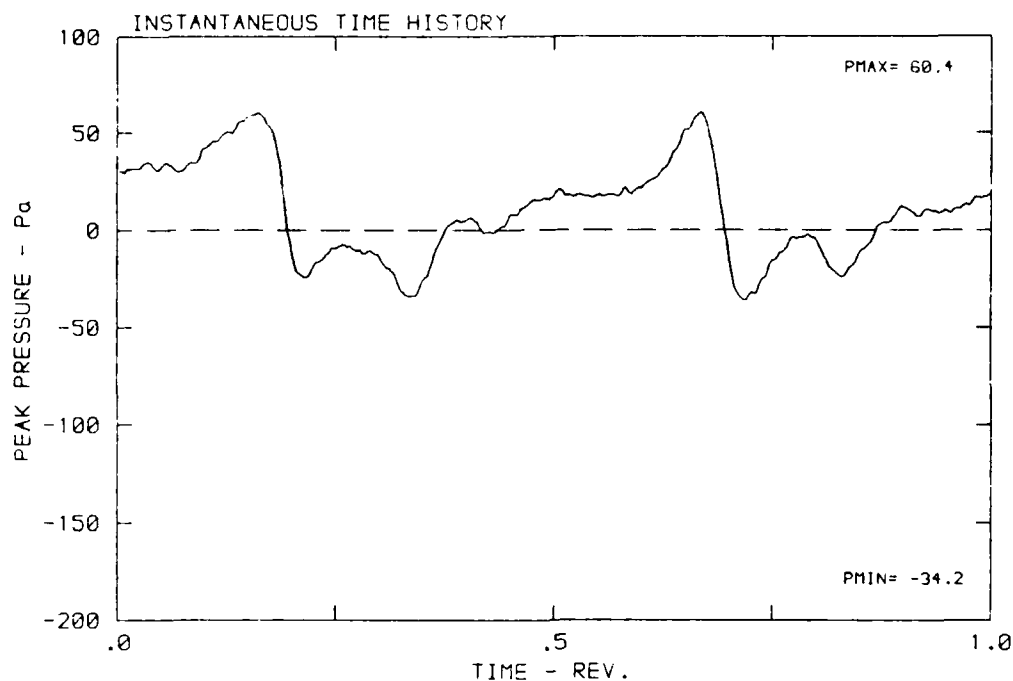
DATA POINT: FN-6 RUN: 171 MP: 4

β : 23.7° MH: .7756 n: 2400 rpm v/u: .264 ϕ : 3.6° T: 288.4 K



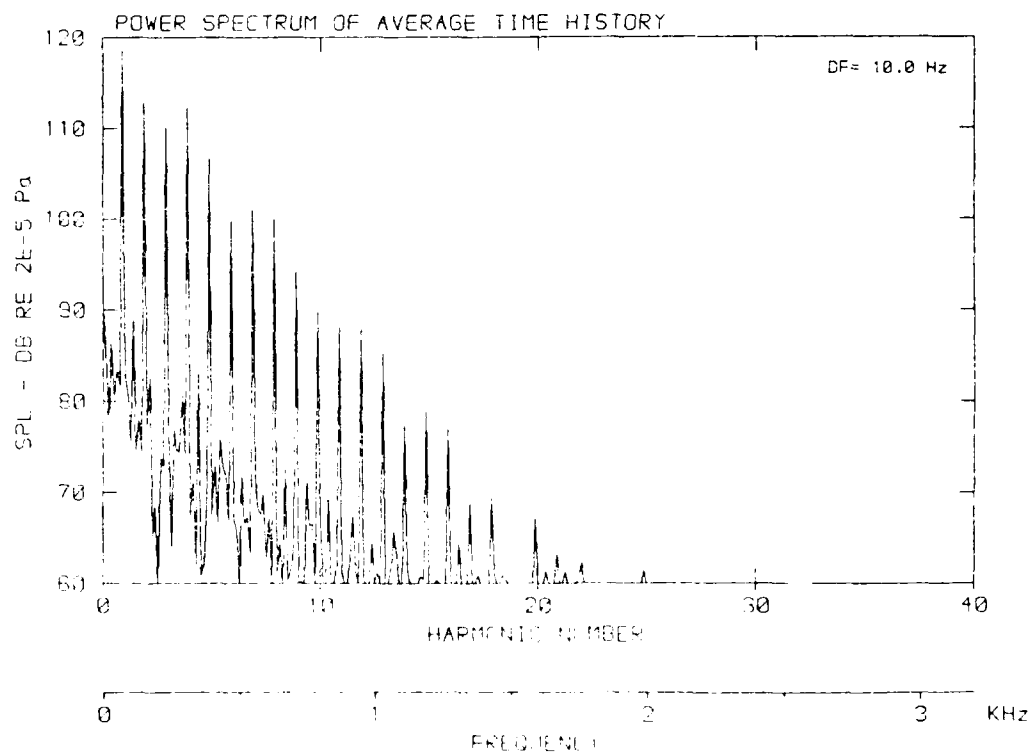
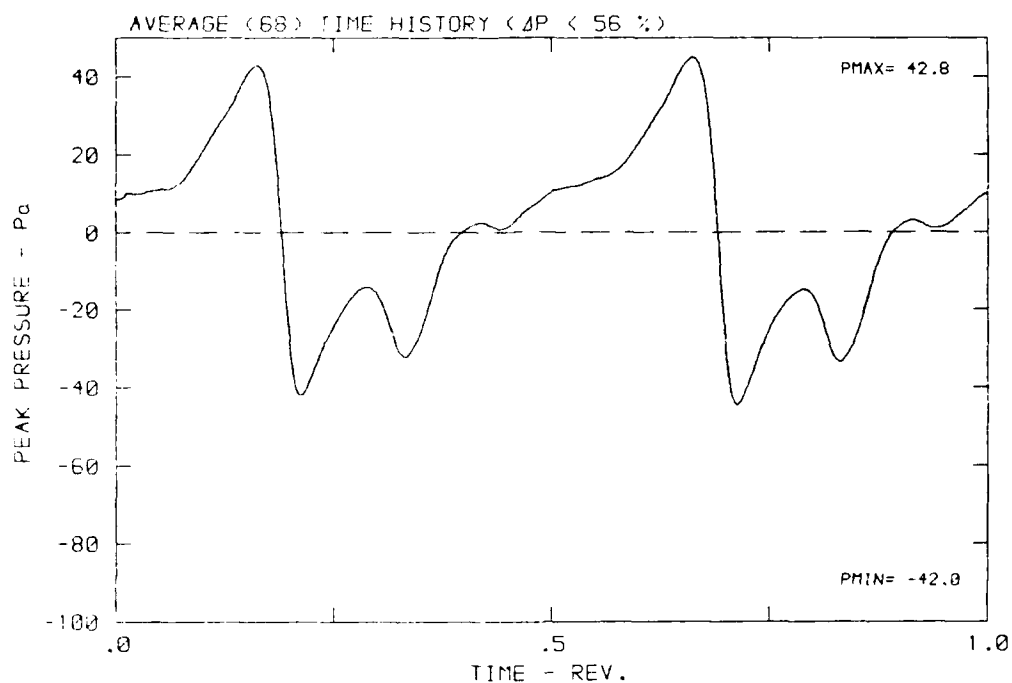
DATA POINT: FN-6 RUN: 171 MP: 5

β : 23.7° MH: .7756 n: 2400 rpm v/u : .264 ϕ : 3.6° T: 288.4 K



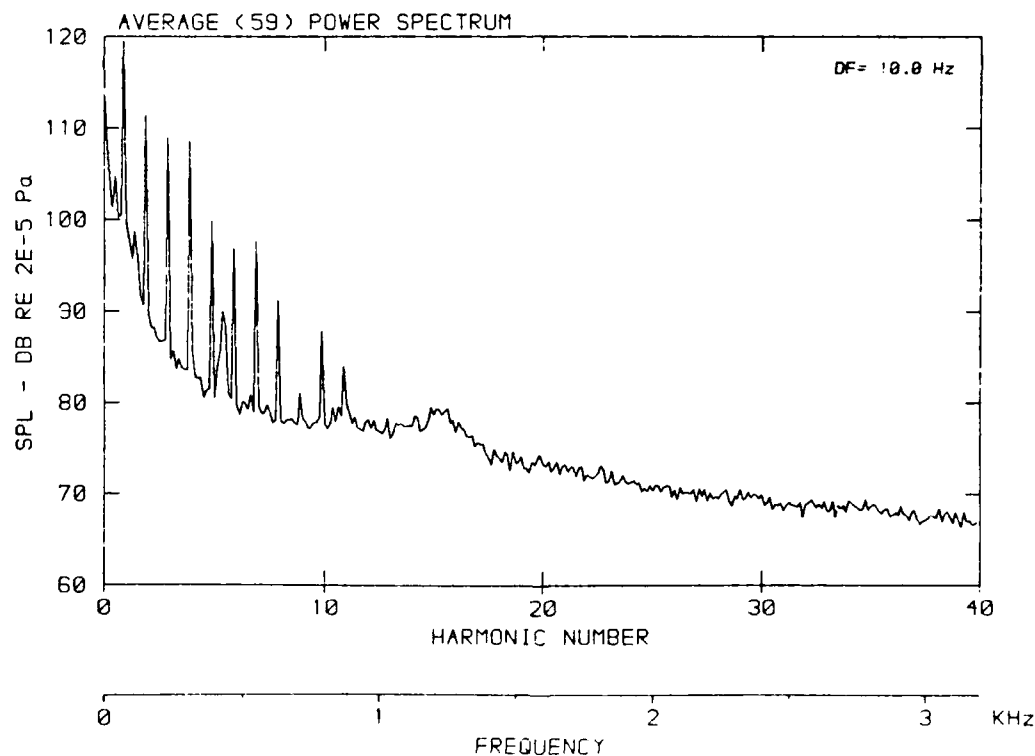
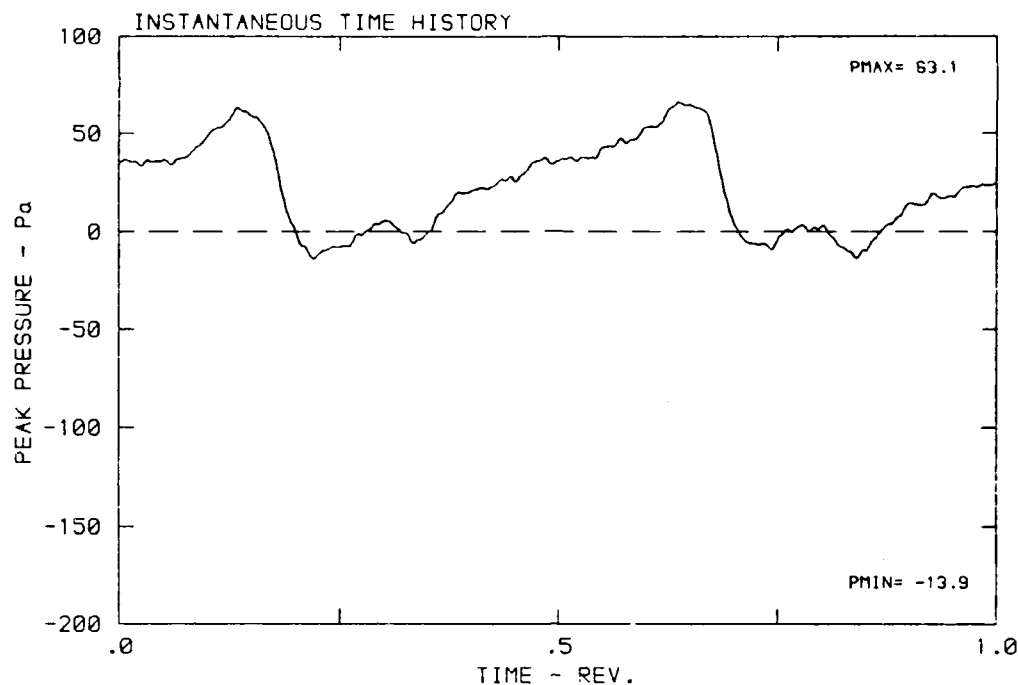
DATA POINT: FN-3 RUN: 171 MP: 5

β : 23.7° MH: .7756 n: 2400 rpm v/u: .264 ϕ : 3.6° T: 288.4 K



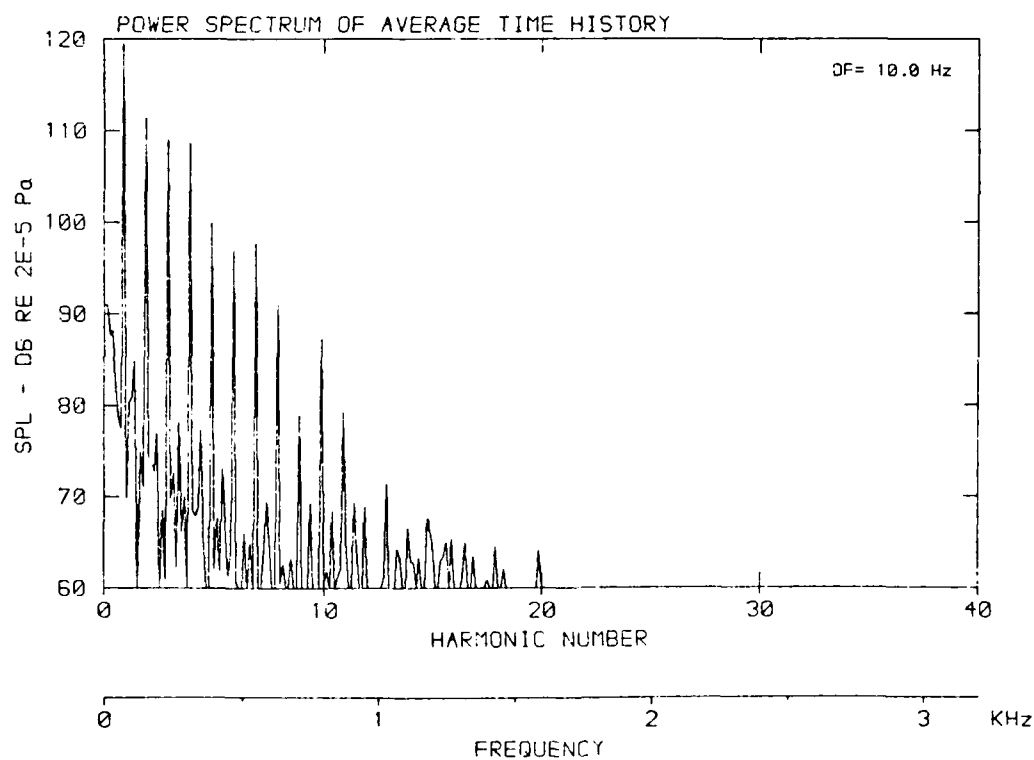
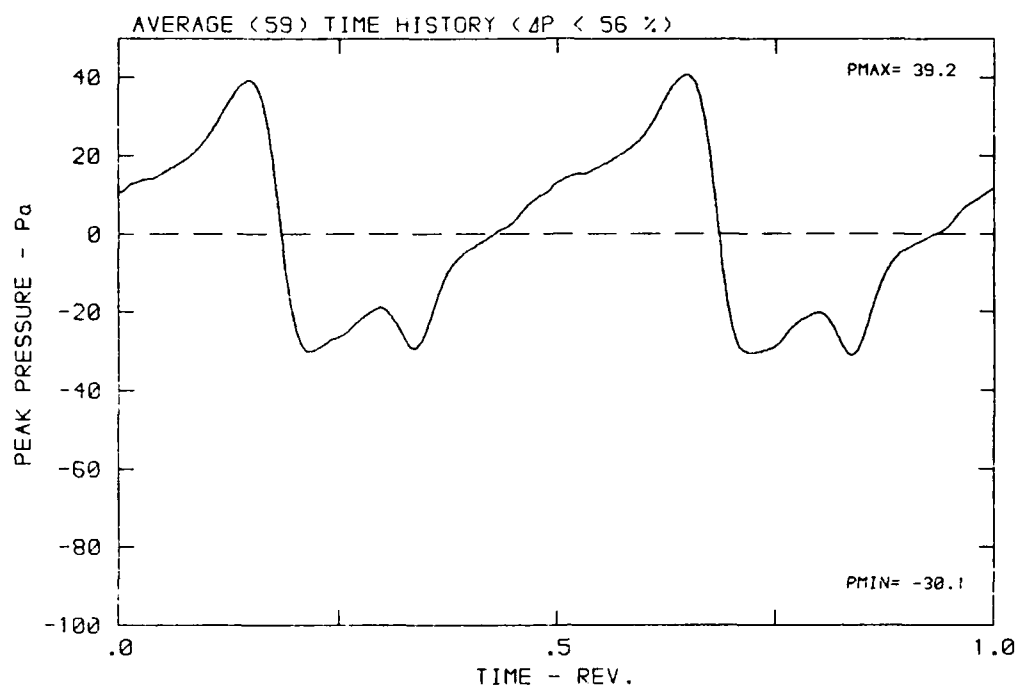
DATA POINT: FN-6 RUN: 171 MP: 6

β : 23.7° MH: .7756 n: 2400 rpm v/u: .264 ϕ : 3.6° T: 288.4 K



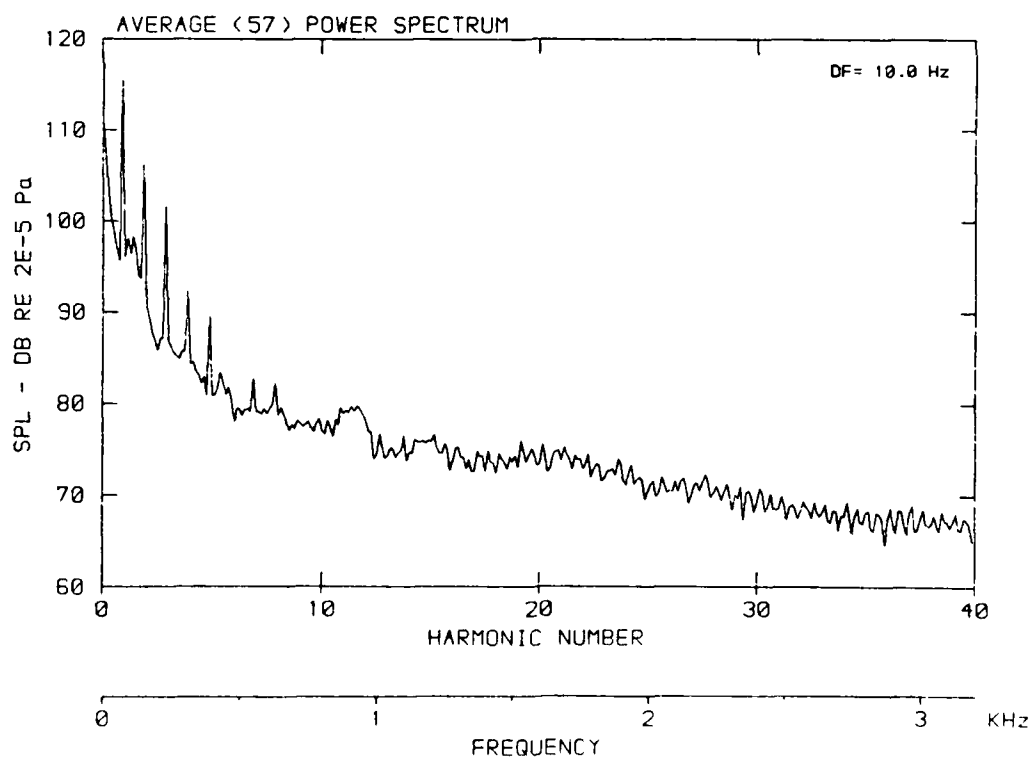
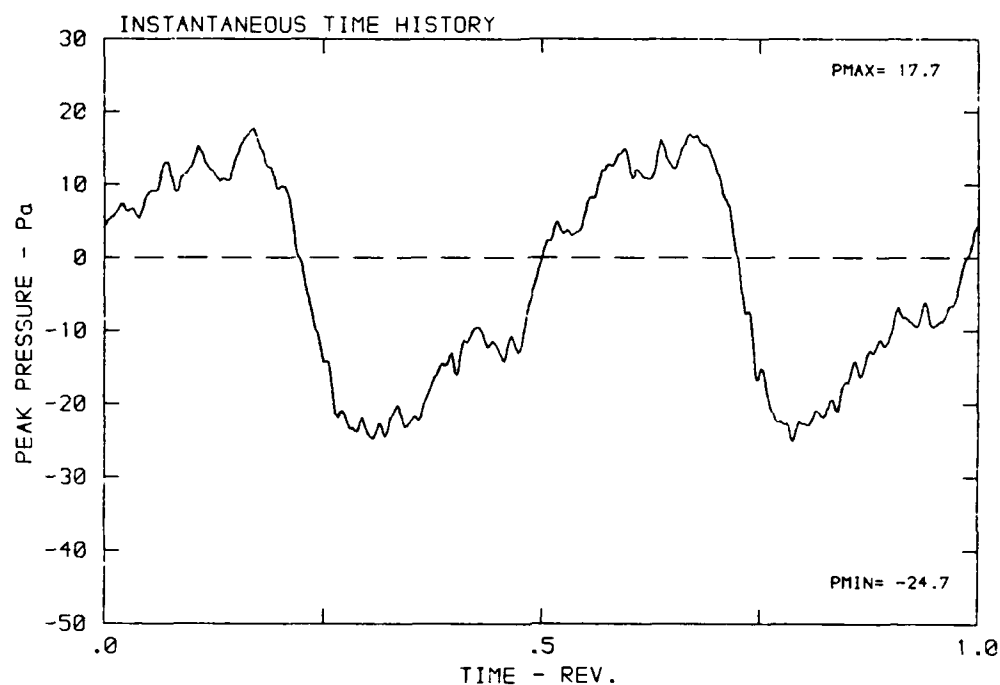
DATA POINT: FN-6 RUN: 171 MP: 6

β : 23.7° MH: .7756 n: 2400 rpm v/u: .264 ϕ : 3.6° T: 288.4 K



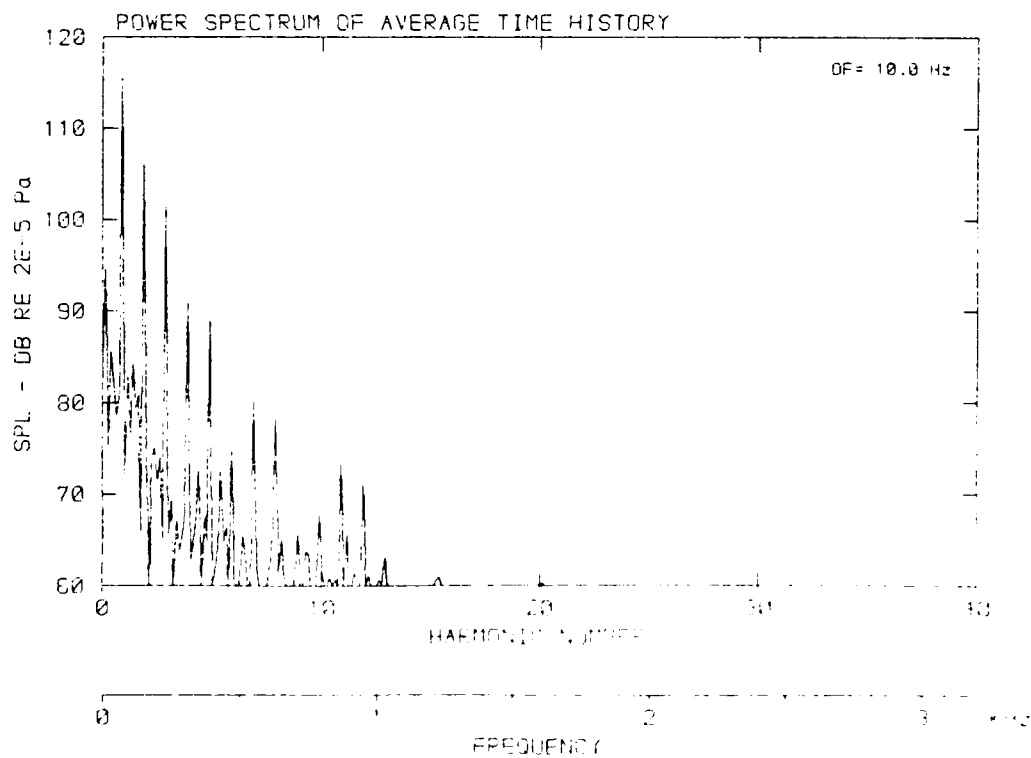
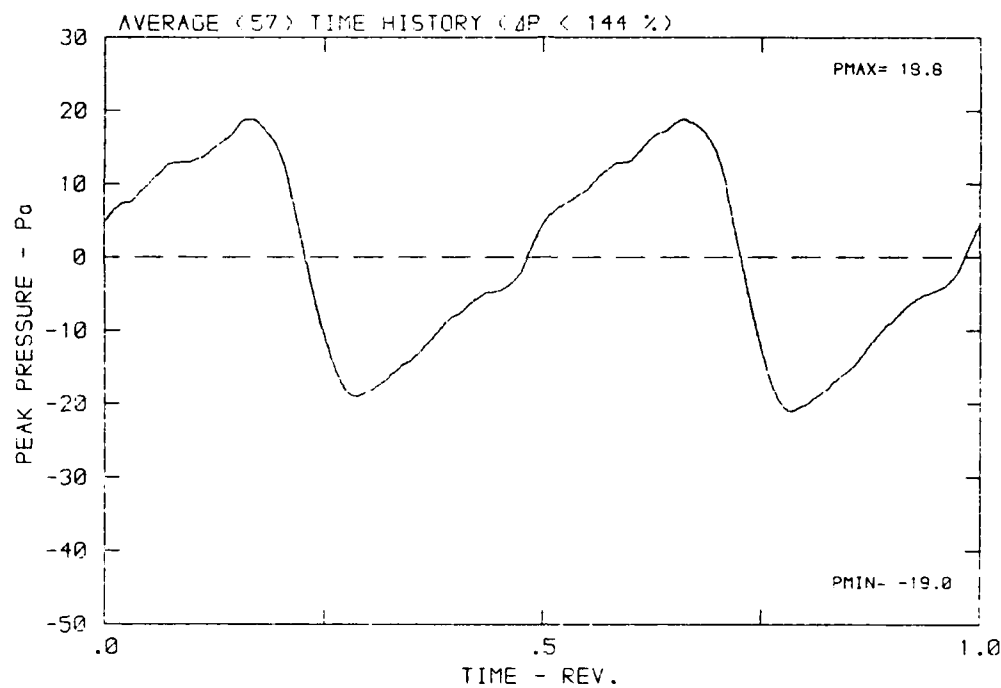
DATA POINT: FN-6 RUN: 171 MP: 7

β : 23.7° MH: .7756 n: 2400 rpm v/u: .264 ϕ : 3.6° T: 288.4 K



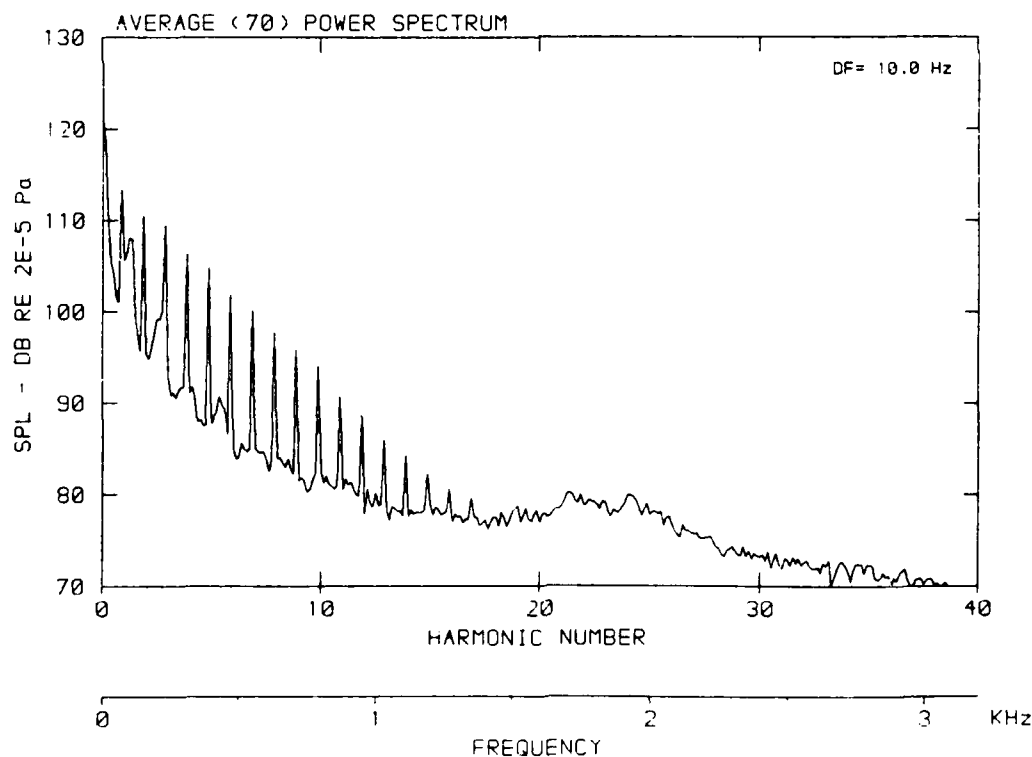
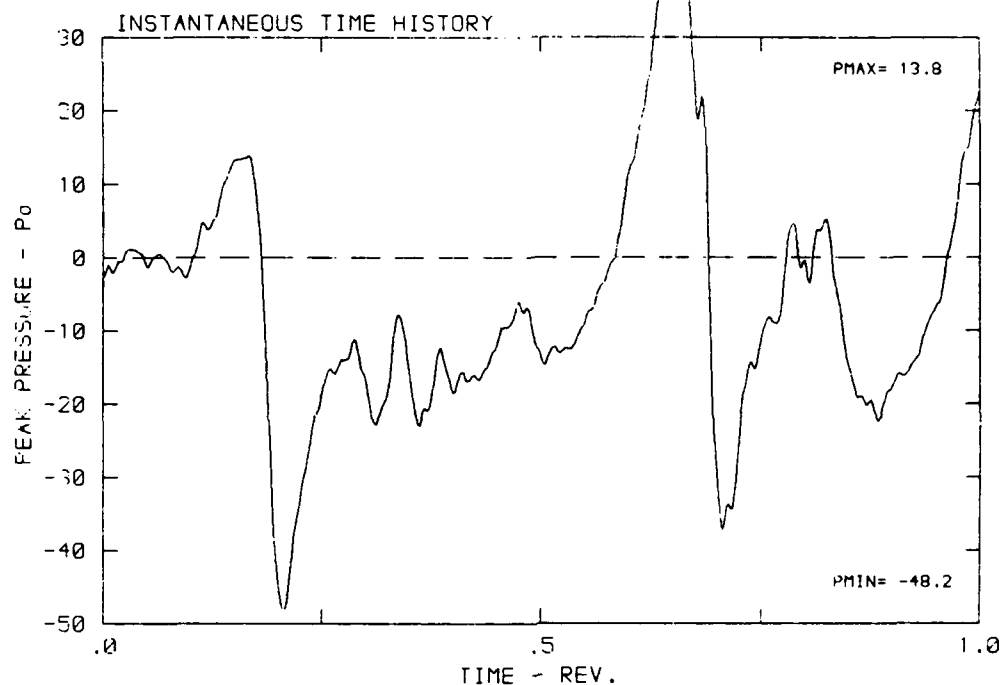
DATA POINT: FN-6 RUN: 171 MP: 7

β : 23.7° MH: .7755 n: 2400 rpm v/u: .264 ϕ : 3.6° T: 288.4 K



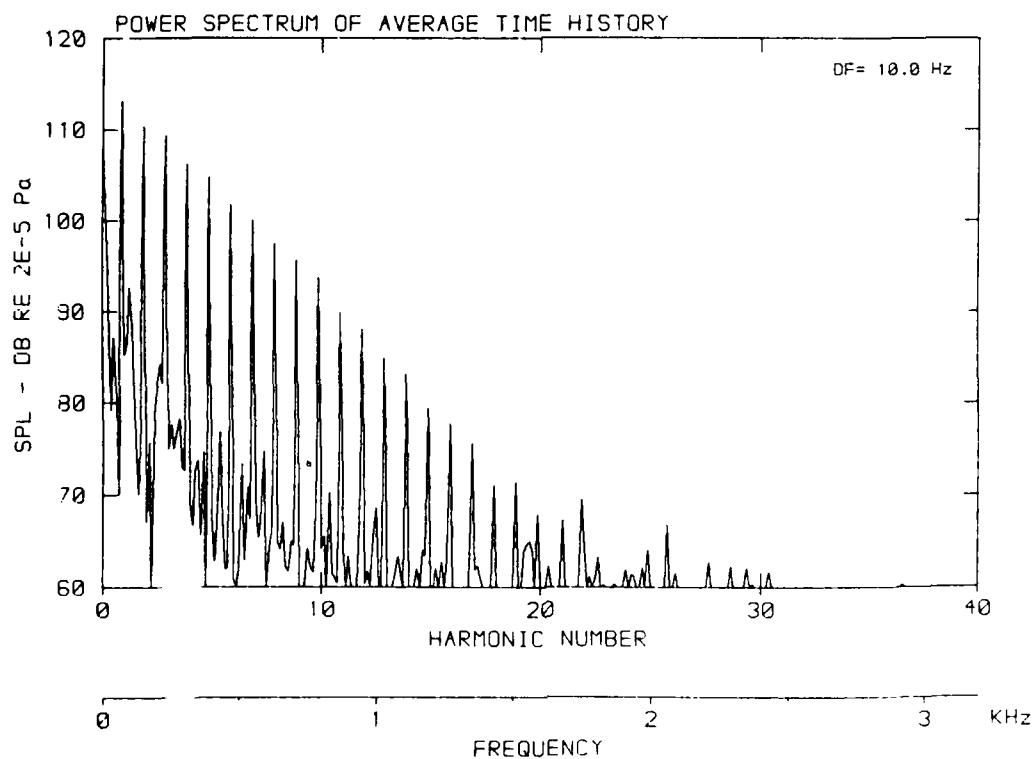
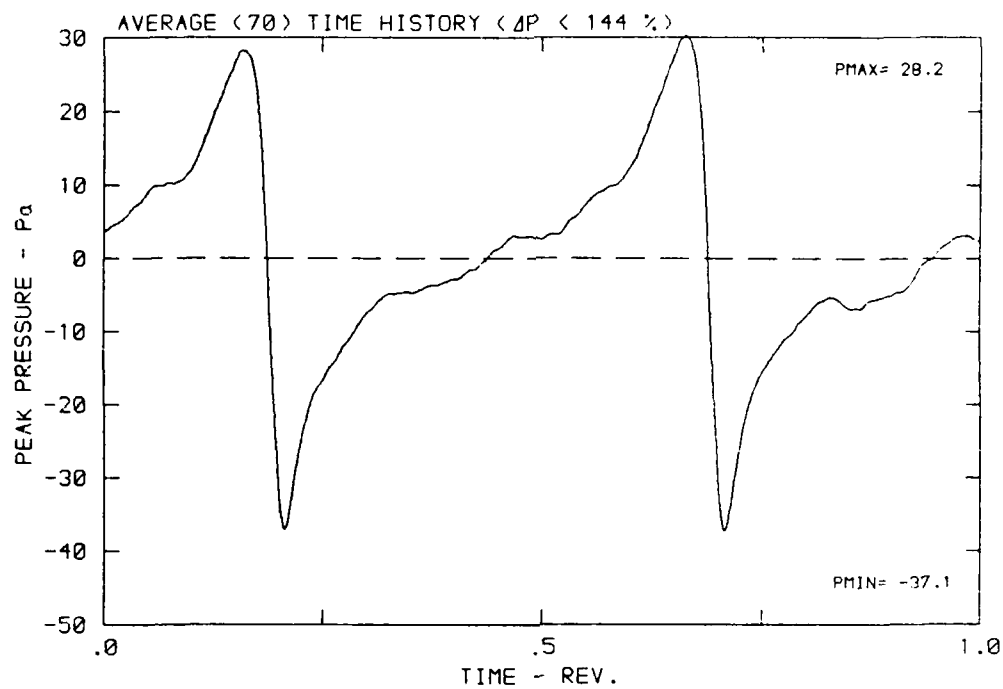
DATA POINT: FN-6 RUN: 171 MP: 8

β : 23.7° MH: .7756 n: 2400 rpm v/u : .264 ϕ : 3.6° T: 288.4 K



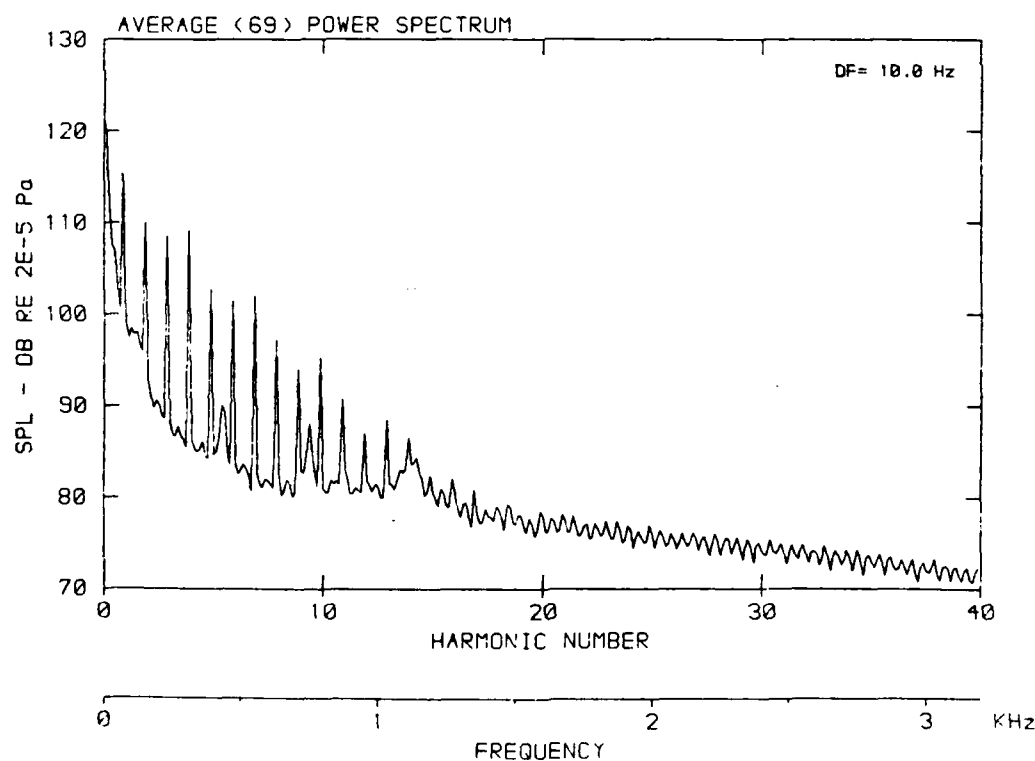
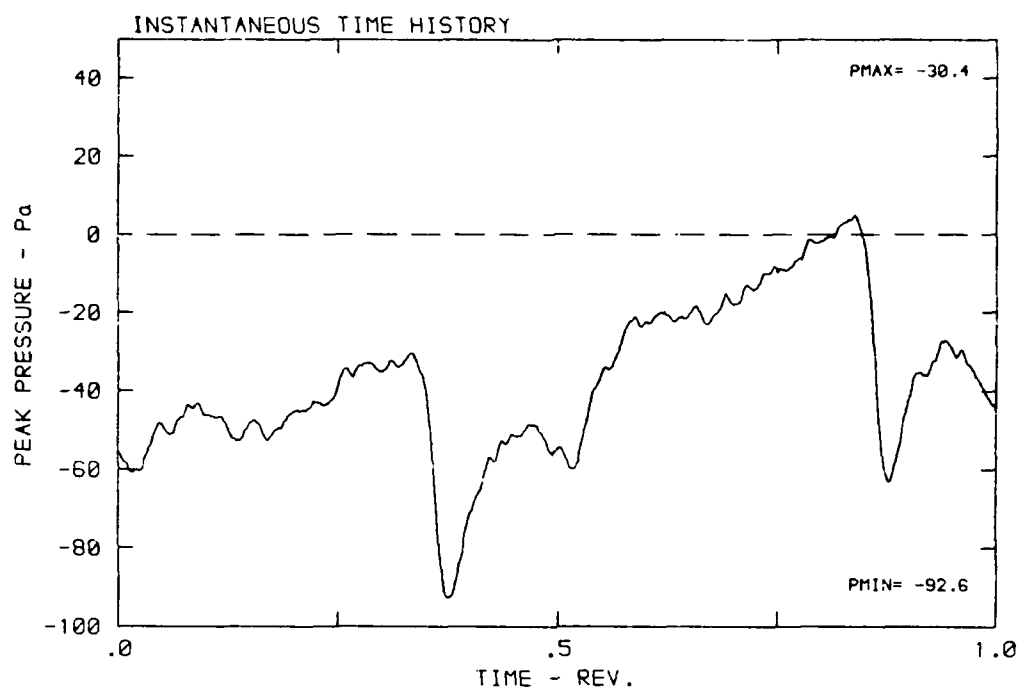
DATA POINT: FN-6 RUN: 171 MP: 8

β : 23.7° MH: .7756 n: 2400 rpm v/u : .264 ϕ : 3.6° T: 288.4 K



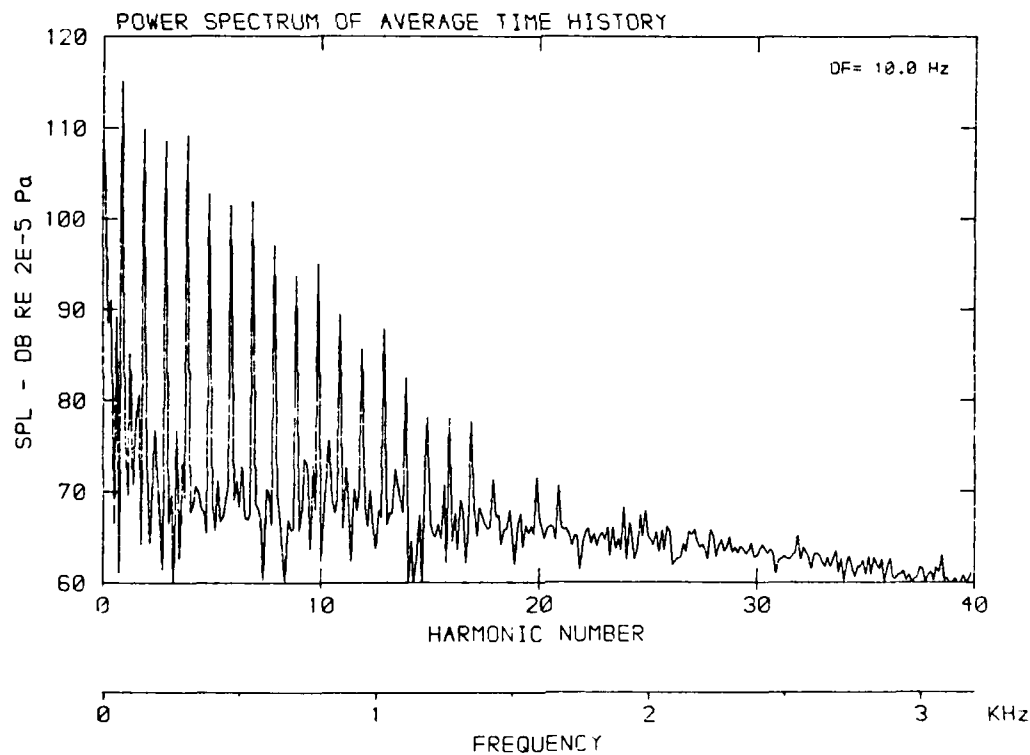
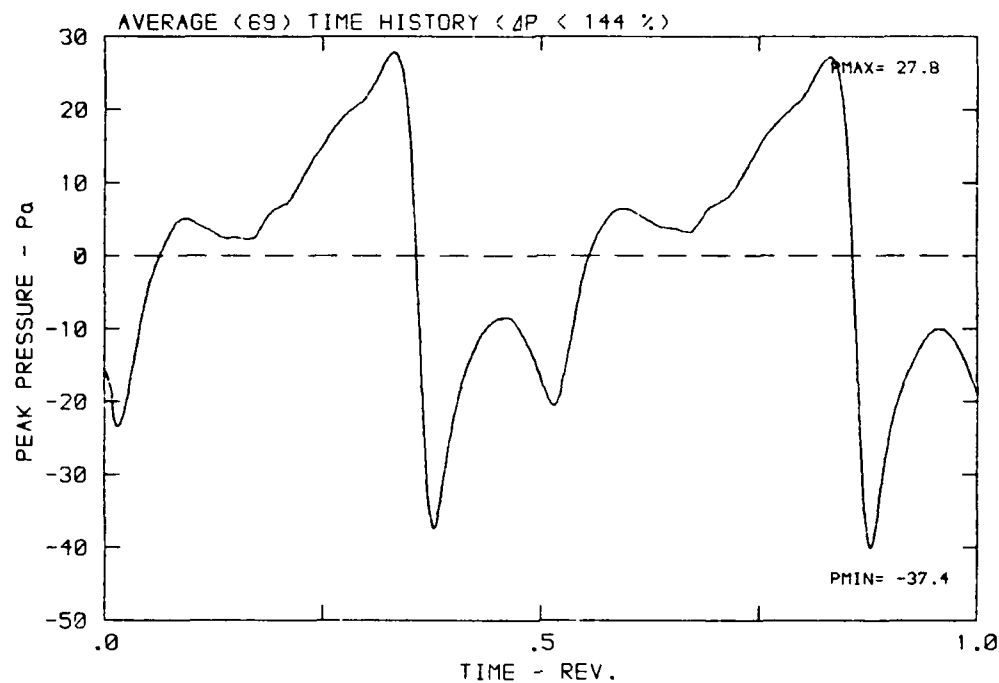
DATA POINT: FN-6 RUN: 171 MP: 9

β : 23.7° MH: .7756 n: 2400 rpm v/u : .264 ϕ : 3.6° T: 288.4 K



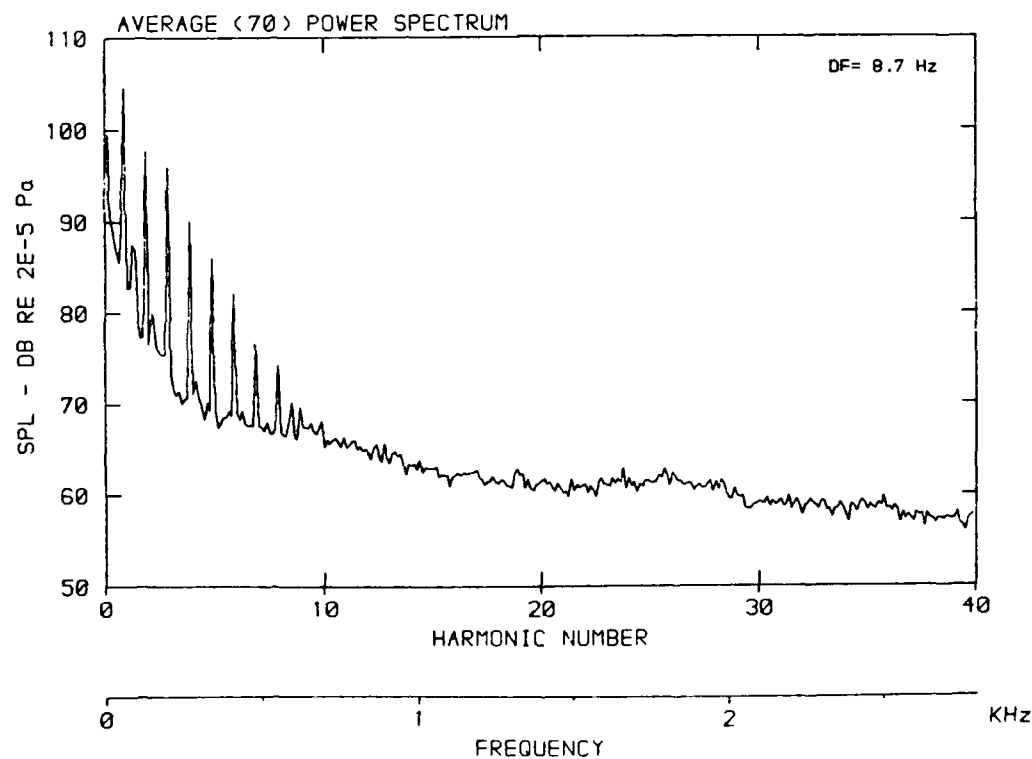
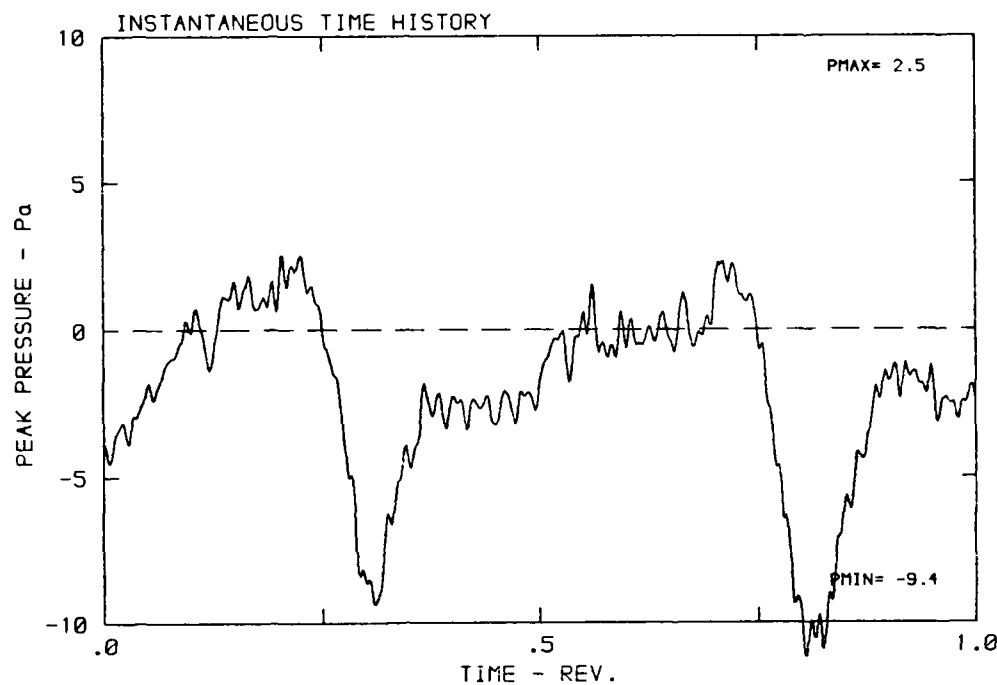
DATA POINT: FN-6 RUN: 171 MP: 9

β : 23.7° MH: .7756 n: 2400 rpm v/u: .264 ϕ : 3.6° T: 288.4 K



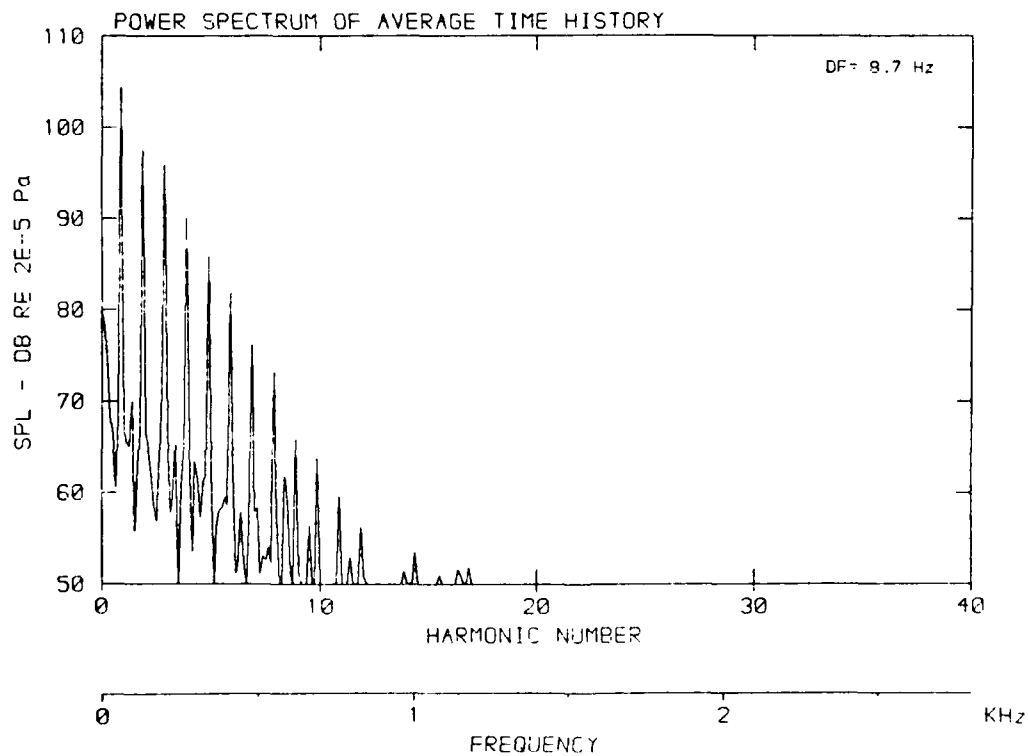
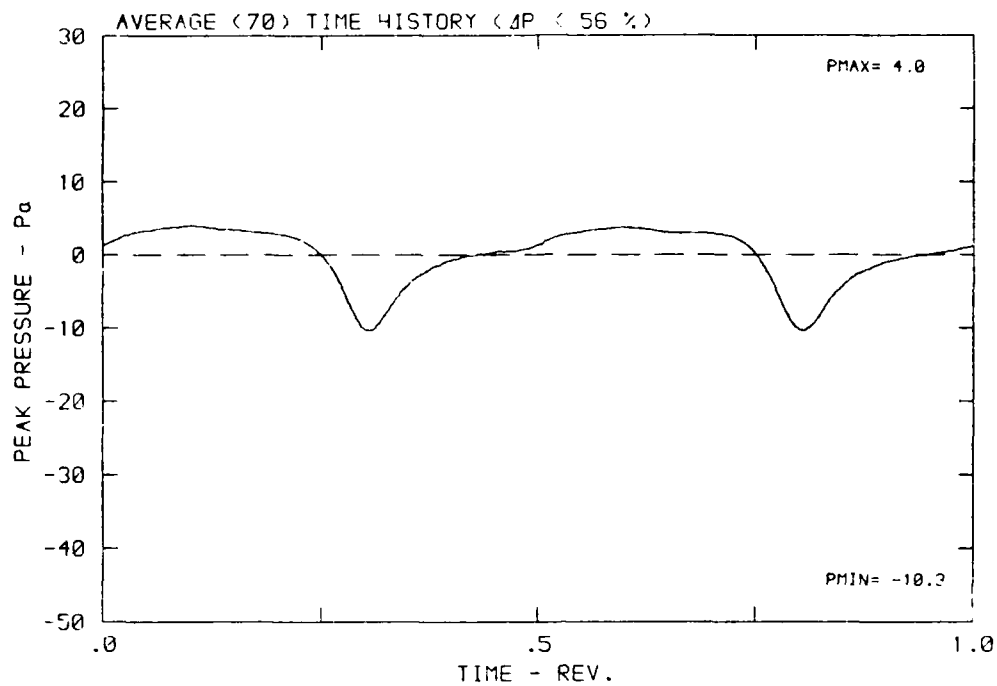
DATA POINT: EN-1 RUN: 163 MP: 1

β : 19.9° MH: .6764 n: 2100 rpm v/u: .230 ϕ : 7.3° T: 285.8 K



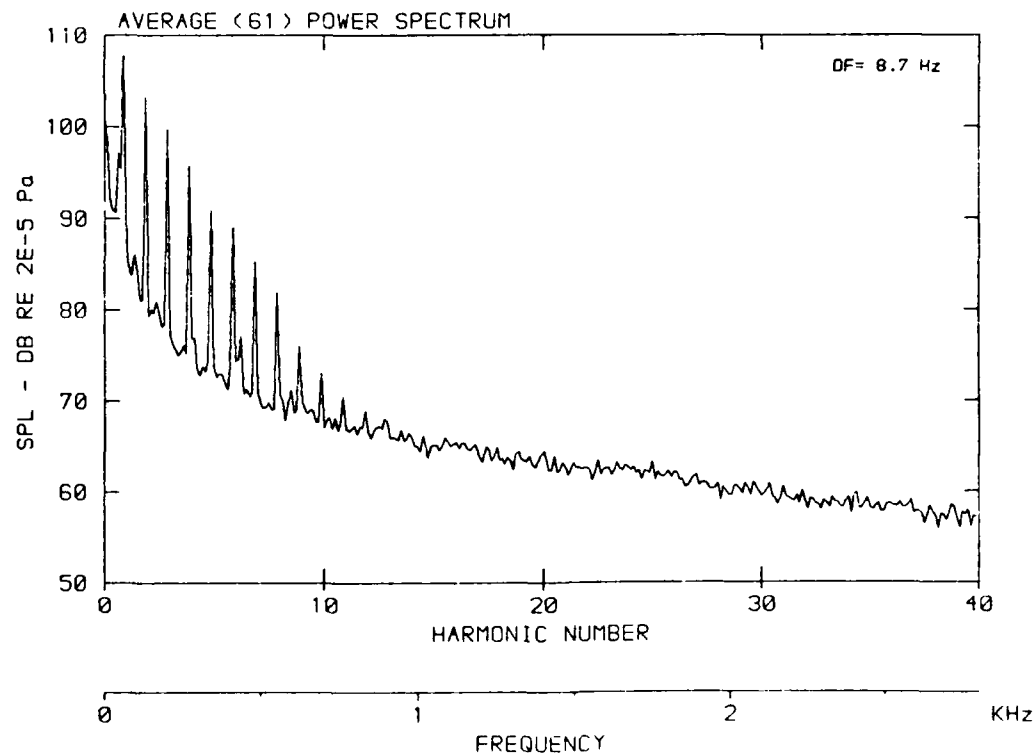
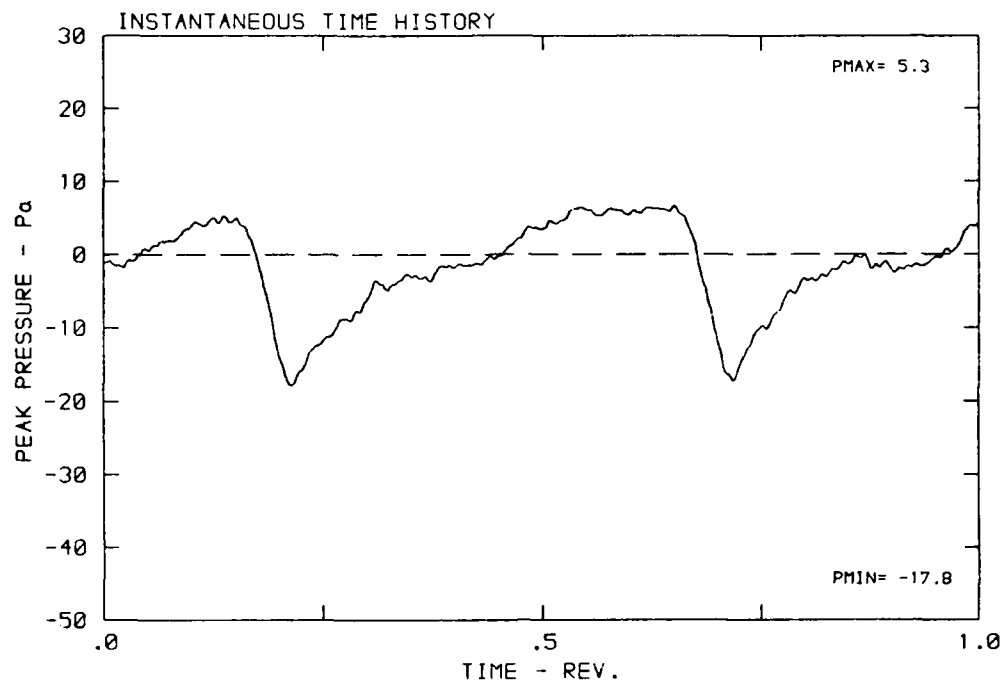
DATA POINT: EN-1 RUN: 163 MP: 1

β : 19.9° MH: .6764 n: 2100 rpm v/u: .230 ϕ : 7.3° T: 285.8 K



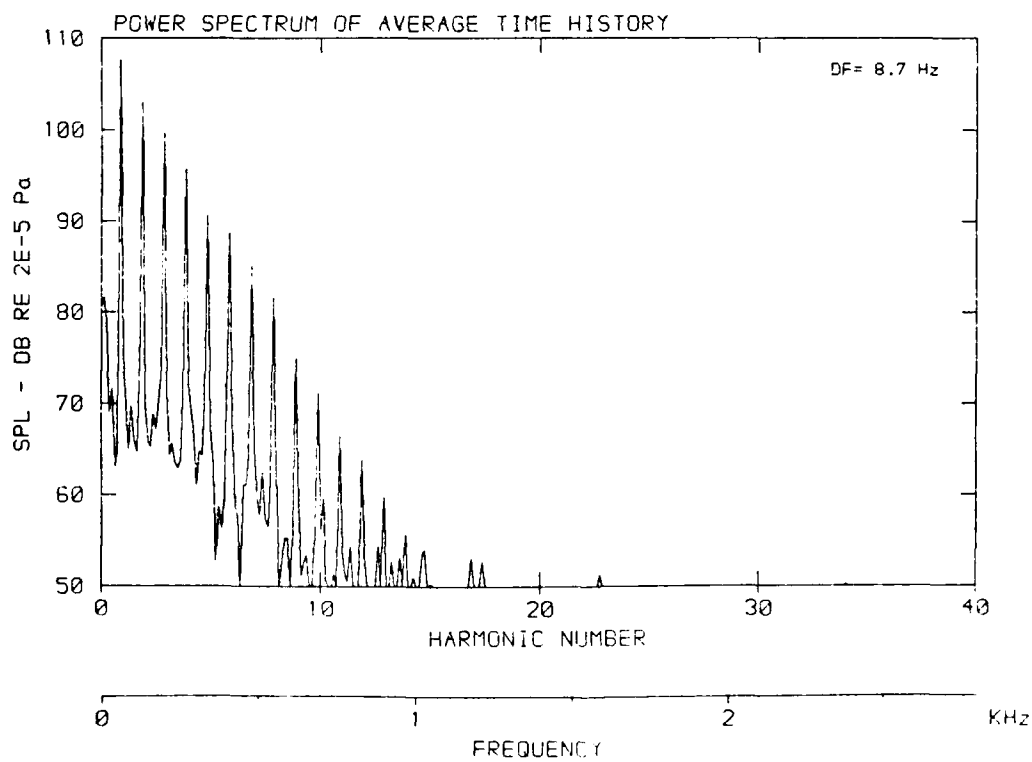
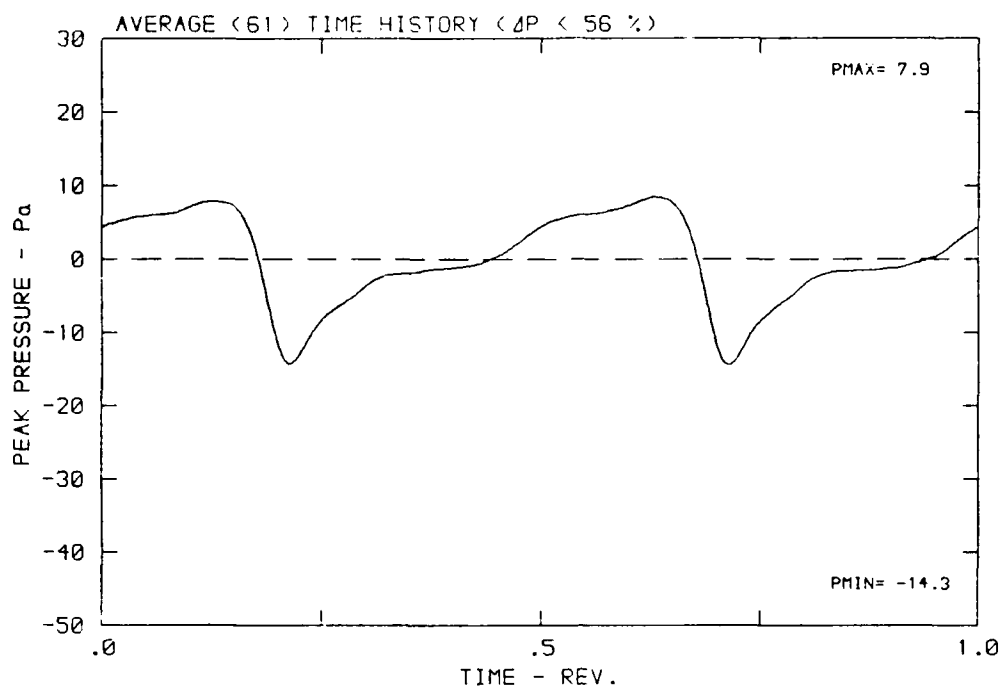
DATA POINT: EN-1 RUN: 163 MP: 2

β : 19.9° MH: .6764 n: 2100 rpm v/u : .230 ϕ : 7.3° T: 285.8 K



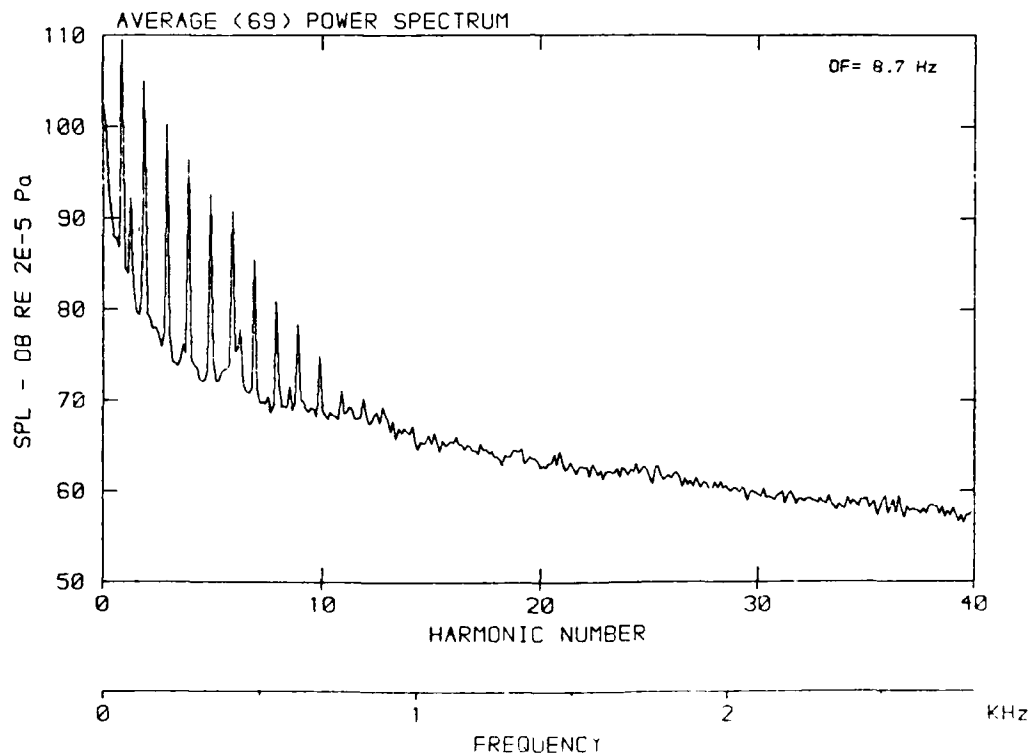
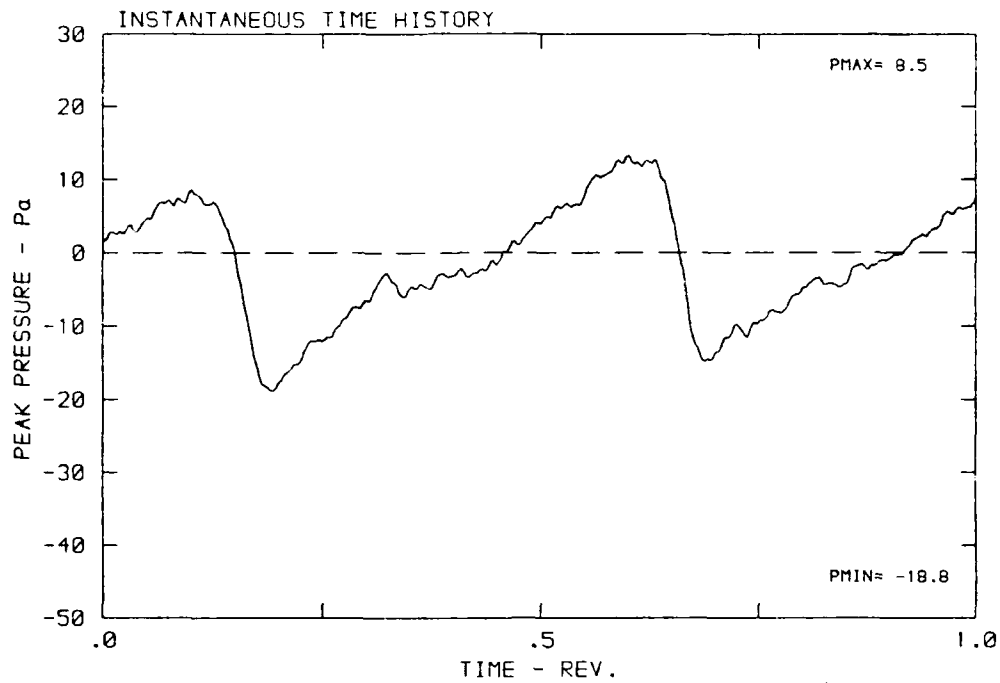
DATA POINT: EN-1 RUN: 163 MP: 2

β : 19.9° MH: .6764 n: 2100 rpm v/u: .230 ϕ : 7.3° T: 285.8 K



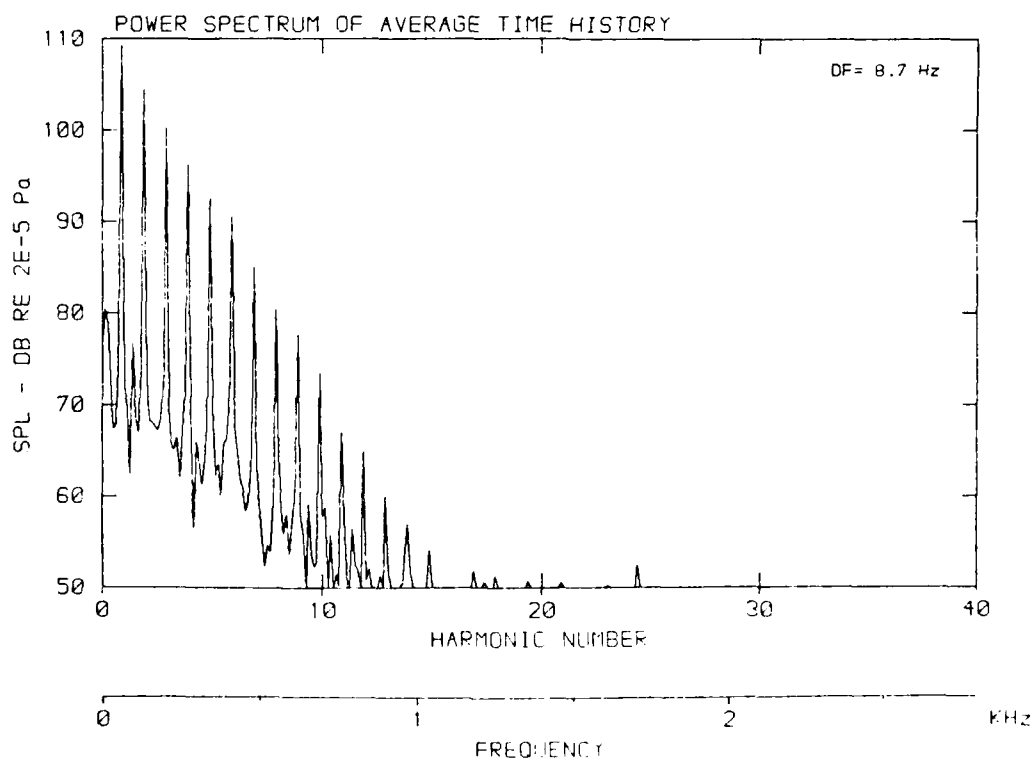
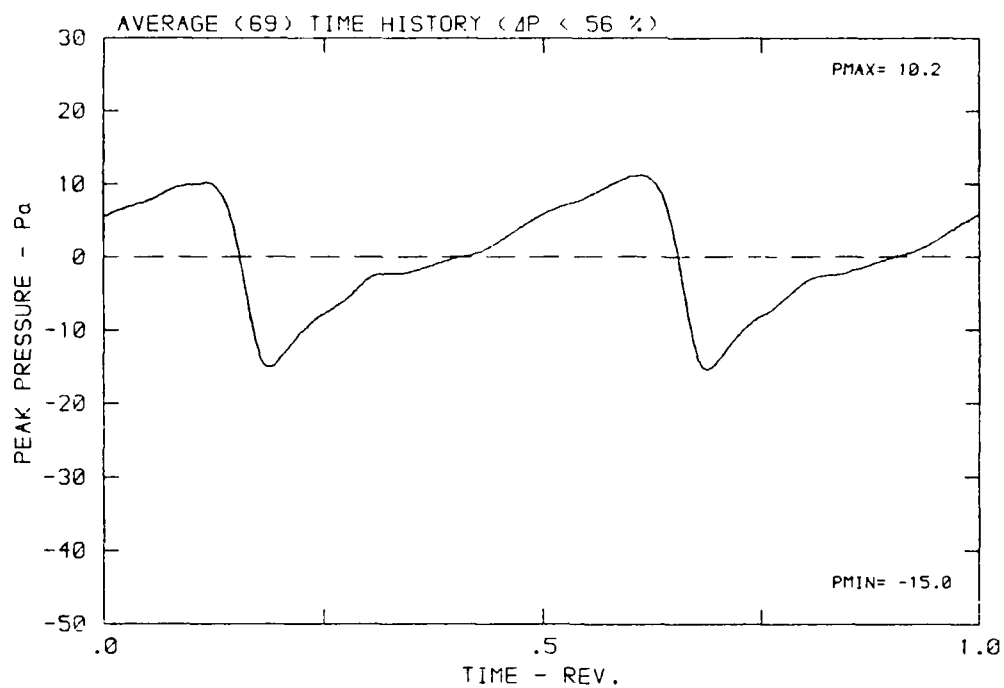
DATA POINT: EN-1 RUN: 153 MP: 3

β : 19.9° MH: .6764 n: 2100 rpm v/u : .230 d : 7.3° T: 285.8 K



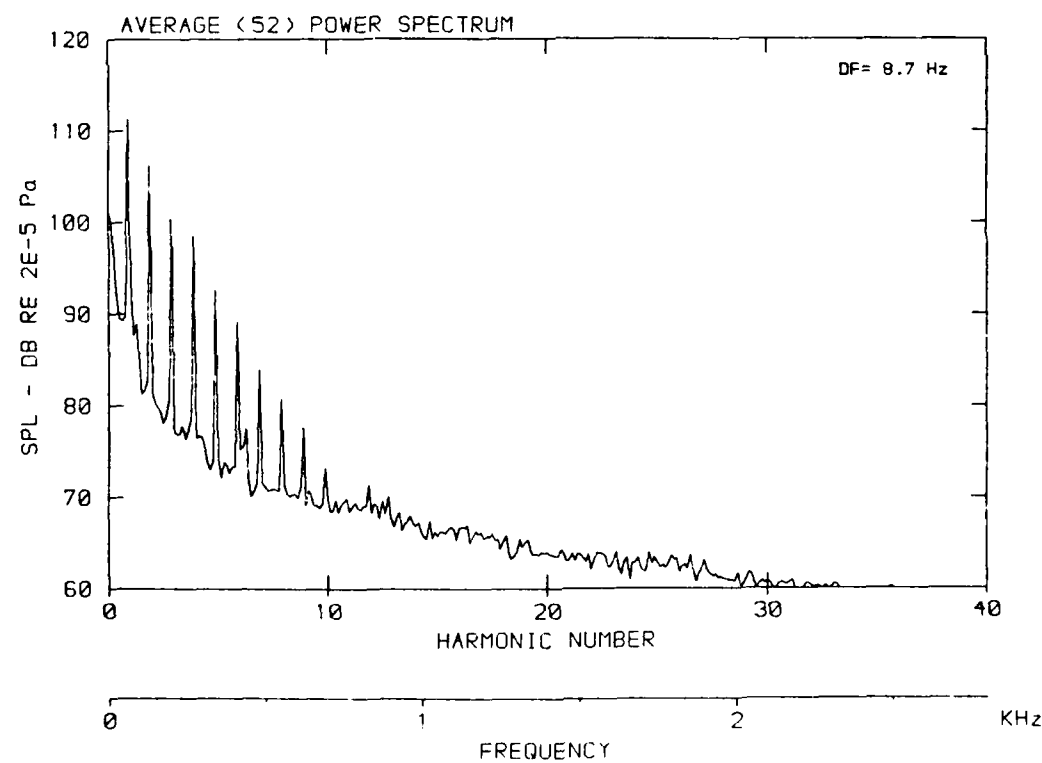
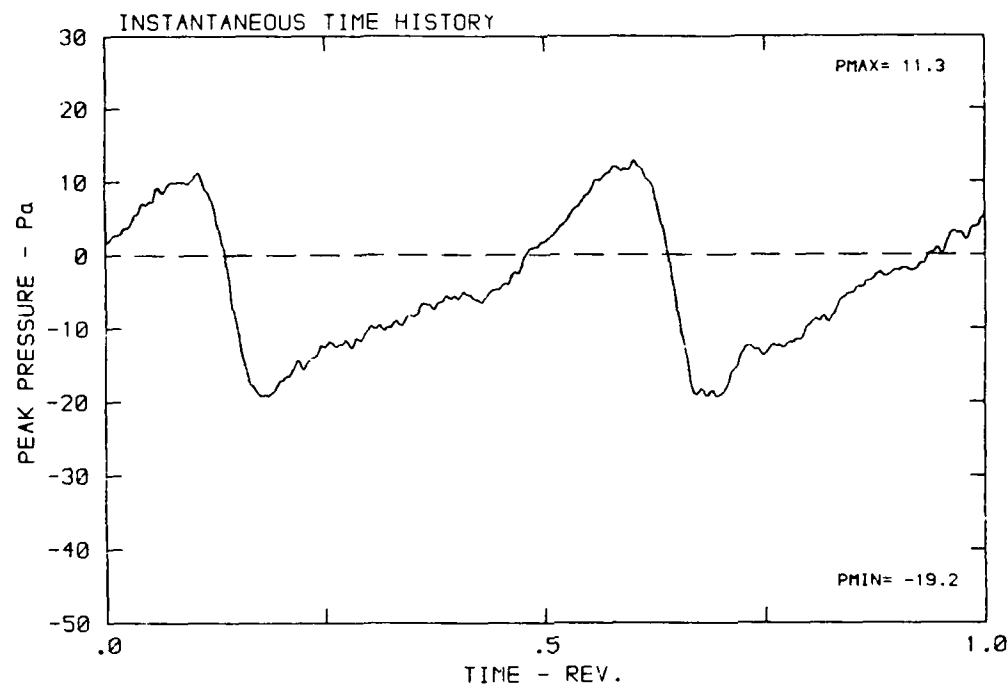
DATA POINT: EN-1 RUN: 163 MP: 3

β : 19.9° MH: .6764 n: 2100 rpm v/u : .230 ϕ : 7.3° T: 285.8 K



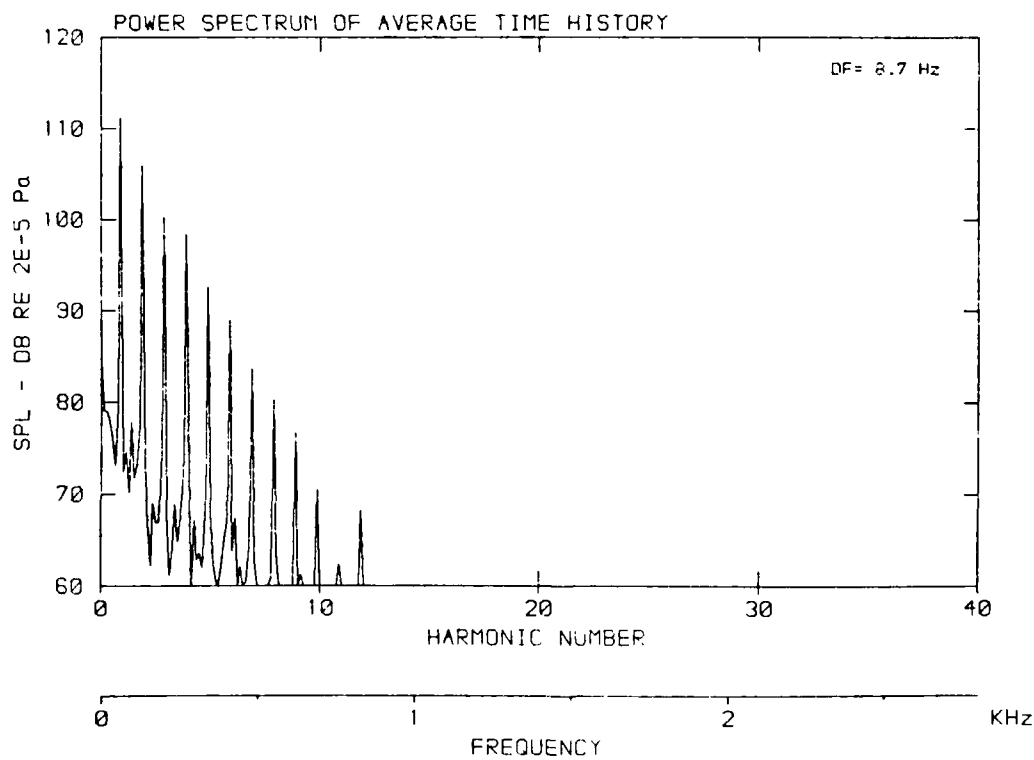
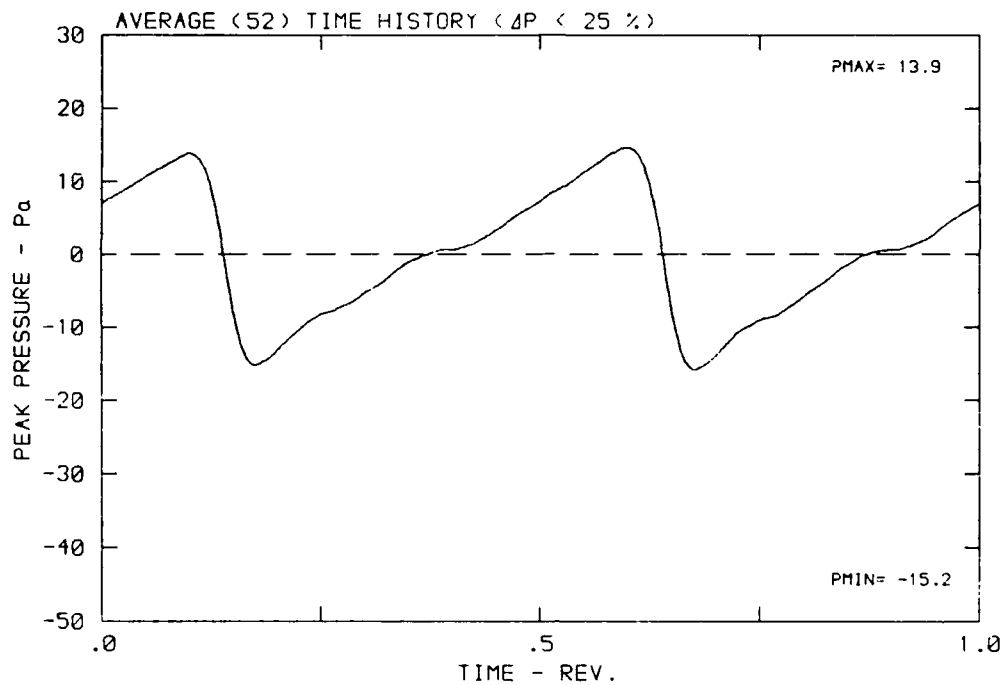
DATA POINT: EN-1 RUN: 163 MP: 4

β : 19.9° MH: .6764 n: 2100 rpm v/u: .230 ϕ : 7.3° T: 285.8 K



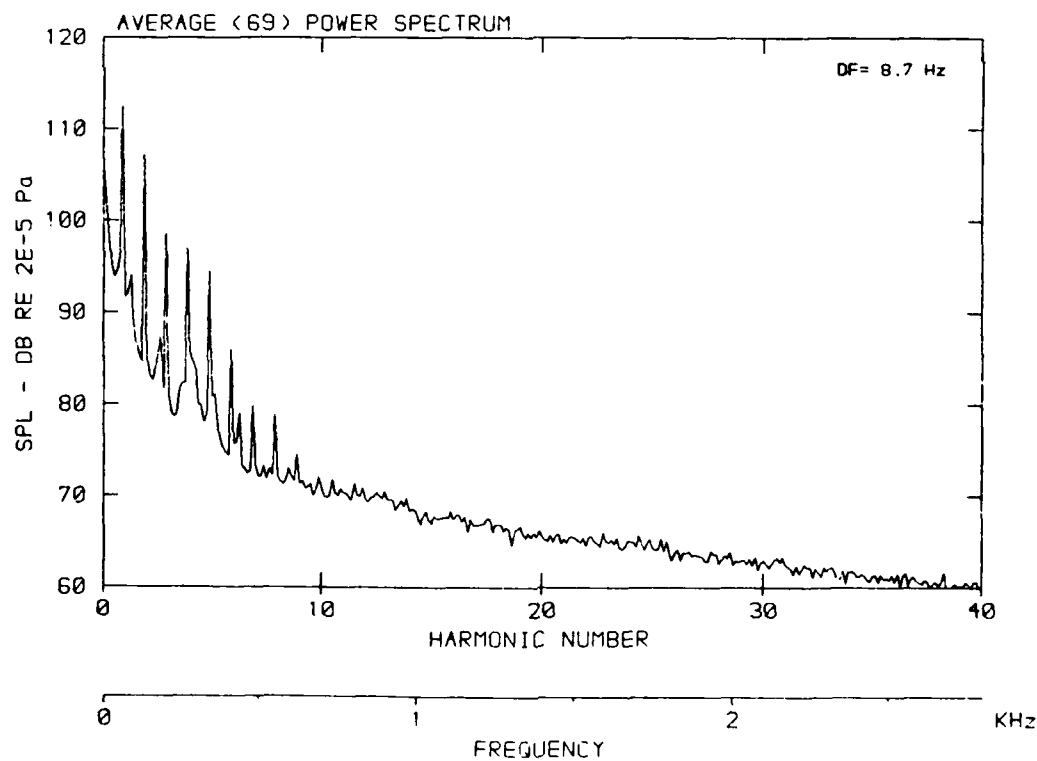
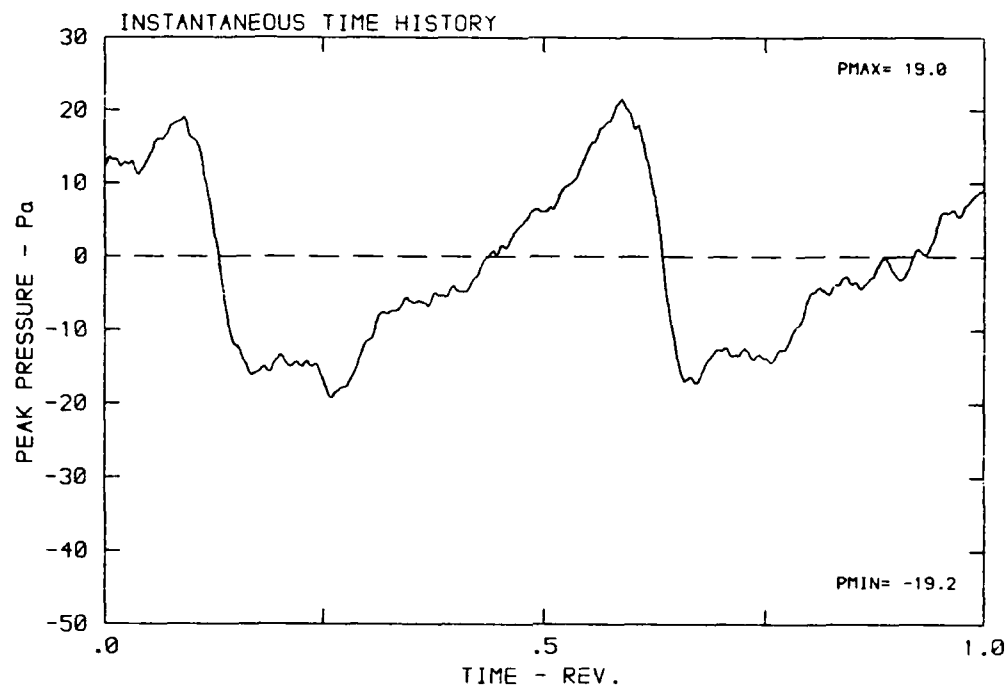
DATA POINT: EN-1 RUN: 163 MP: 4

β : 19.9° MH: .6764 n: 2100 rpm v/u : .230 ϕ : 7.3° T: 285.8 K



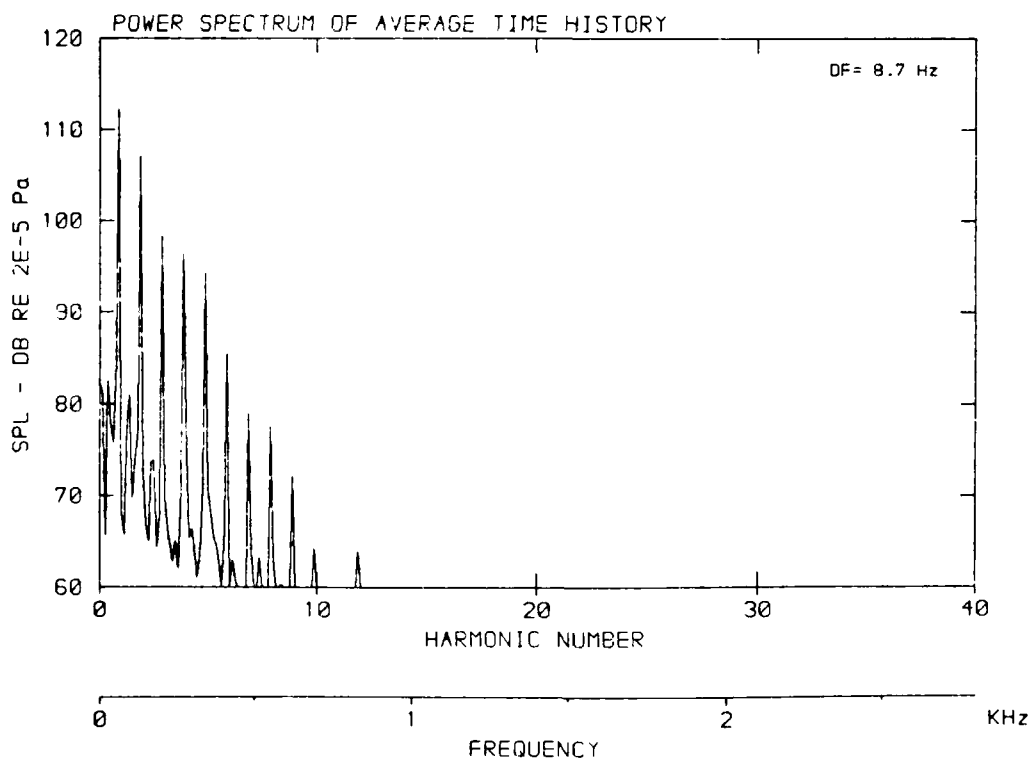
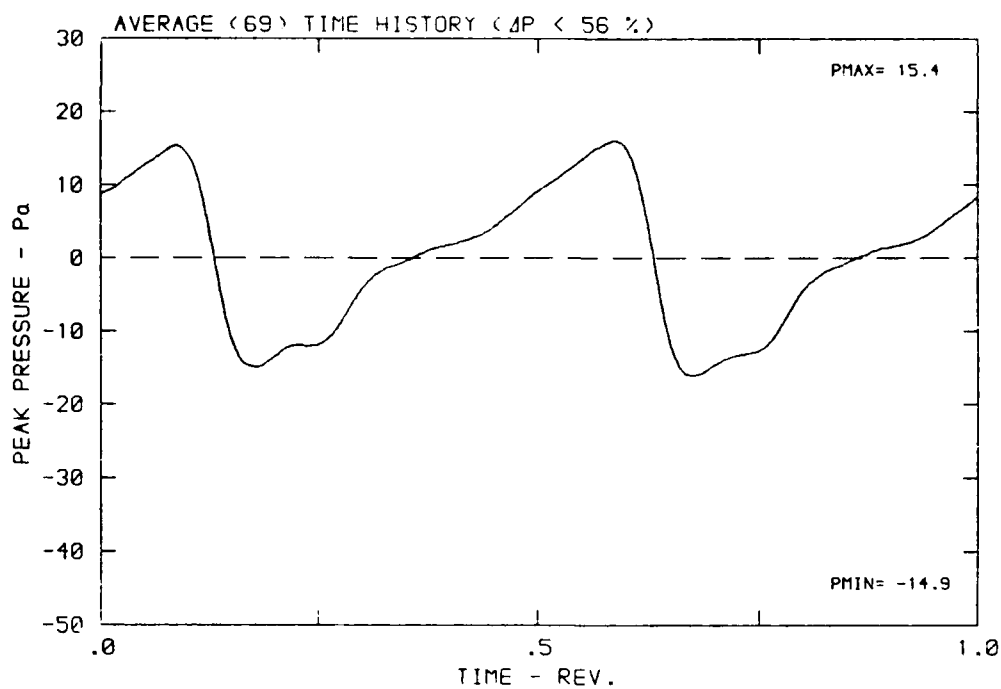
DATA POINT: EN-1 RUN: 163 MP: 5

β : 19.9° MH: .6764 n: 2100 rpm v/u : .230 ϕ : 7.3° T: 285.8 K



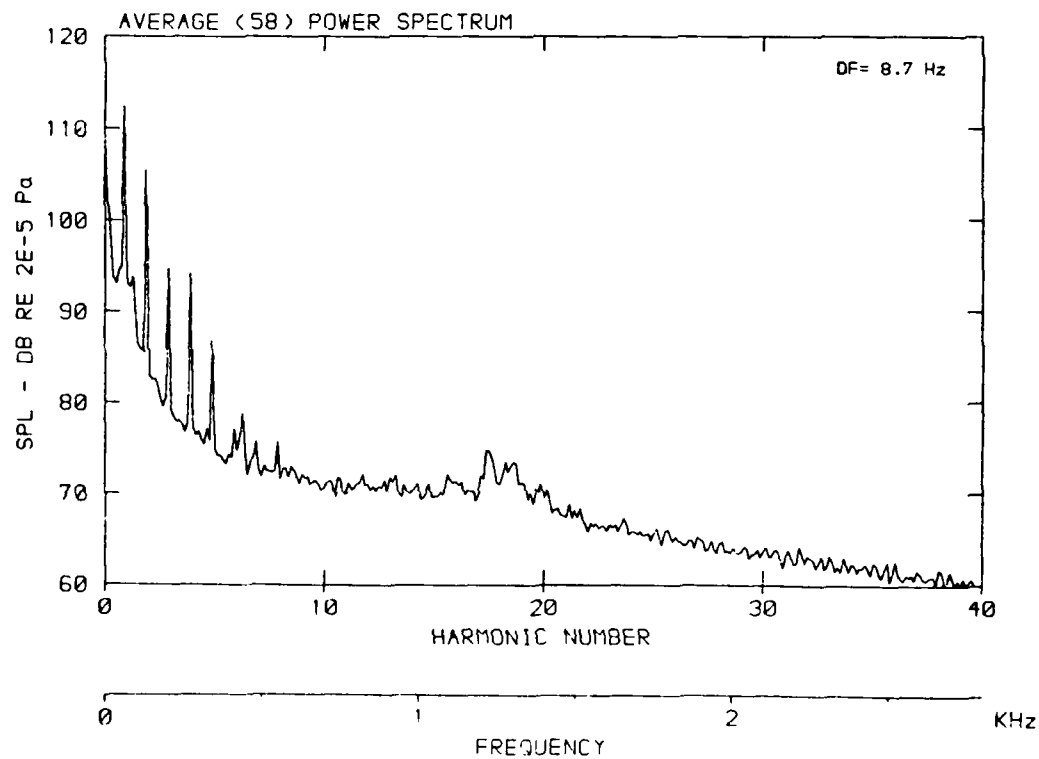
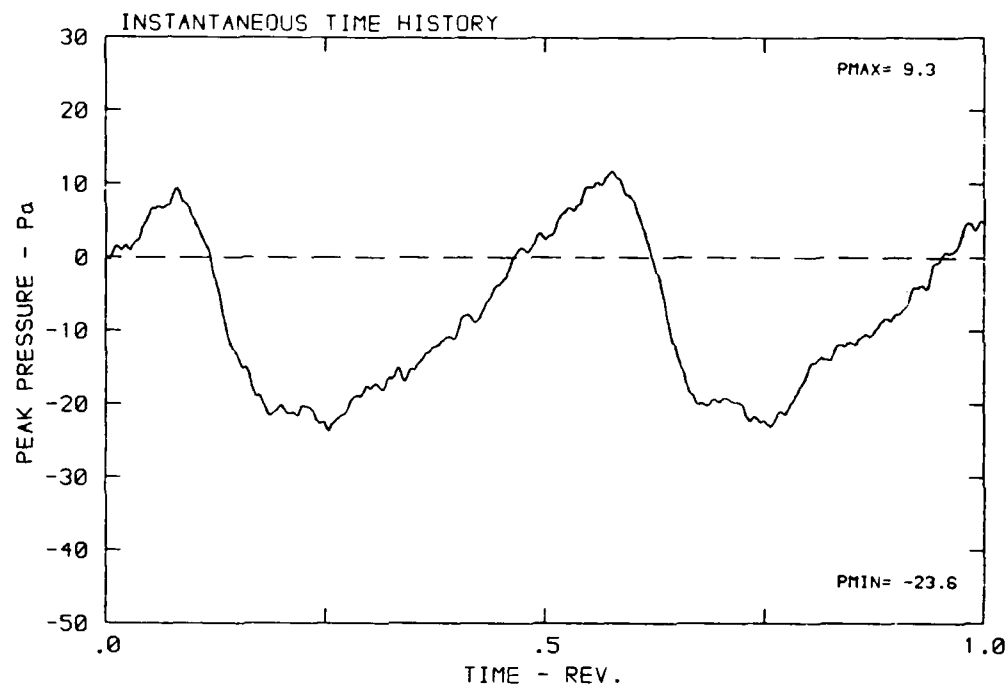
DATA POINT: EN-1 RUN: 163 MP: 5

β : 19.9° MH: .6764 n: 2100 rpm v/u : .230 ϕ : 7.3° T: 285.8 K



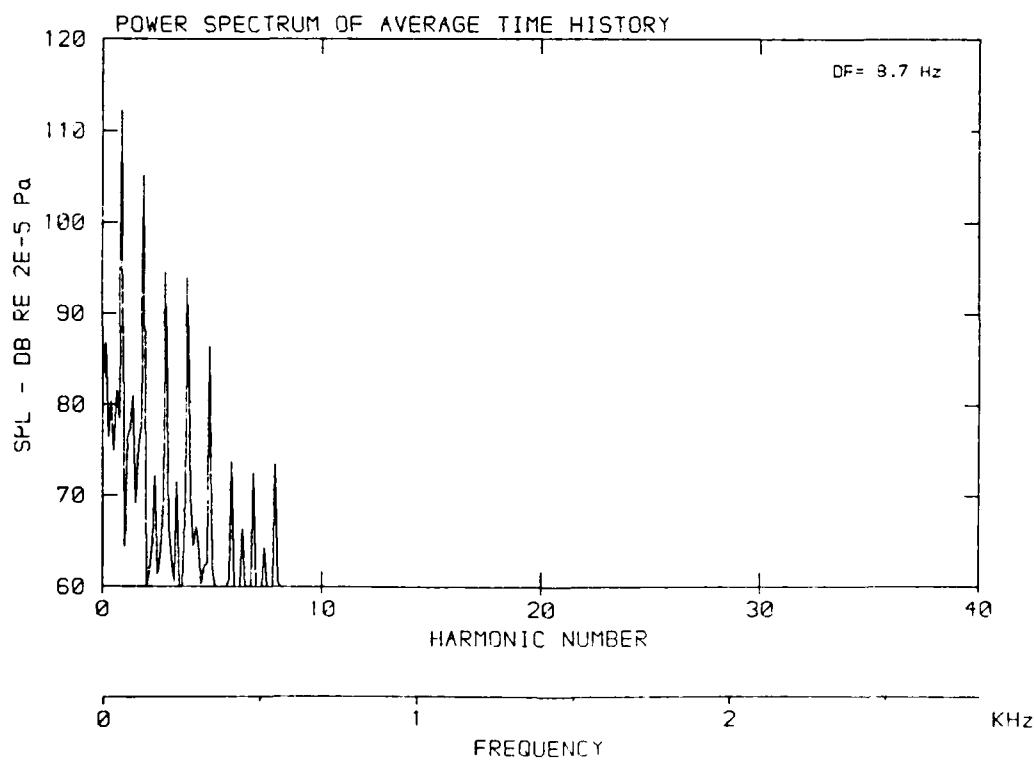
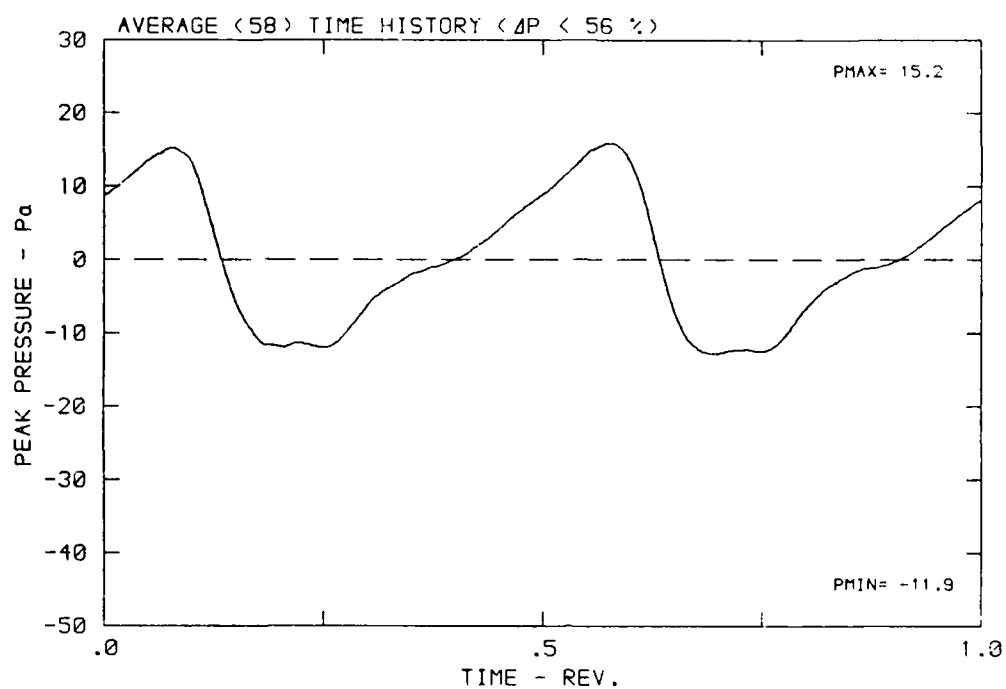
DATA POINT: EN-1 RUN: 163 MP: 6

β : 19.9° MH: .6764 n: 2100 rpm v/u : .230 ϕ : 7.3° T: 285.8 K



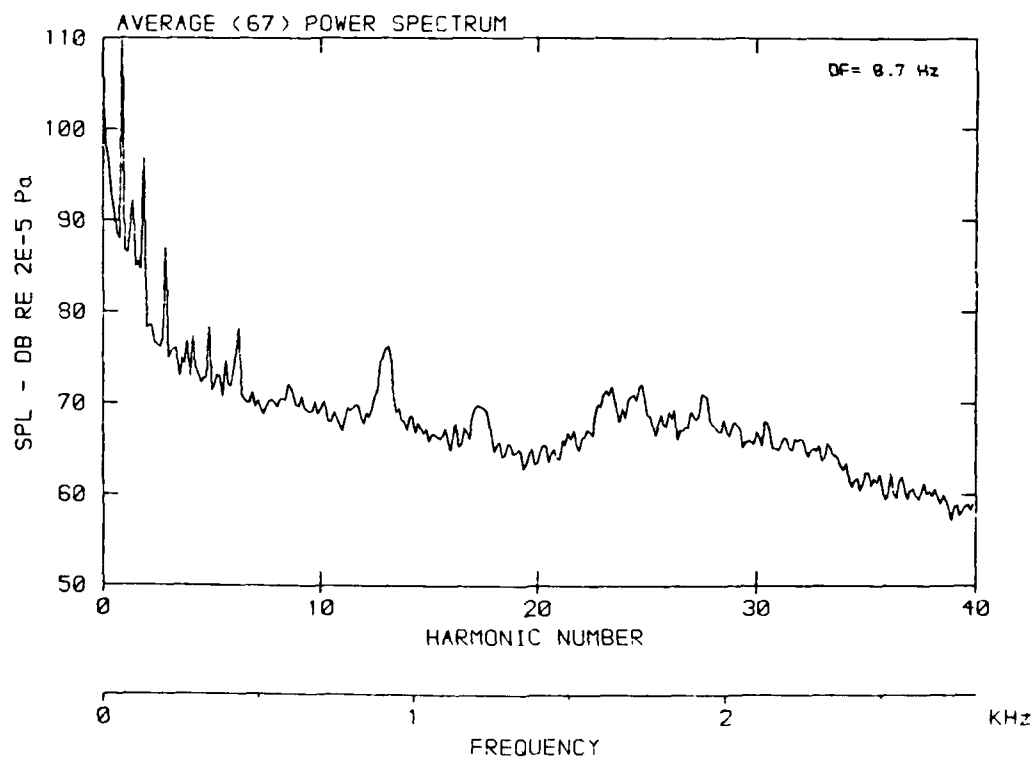
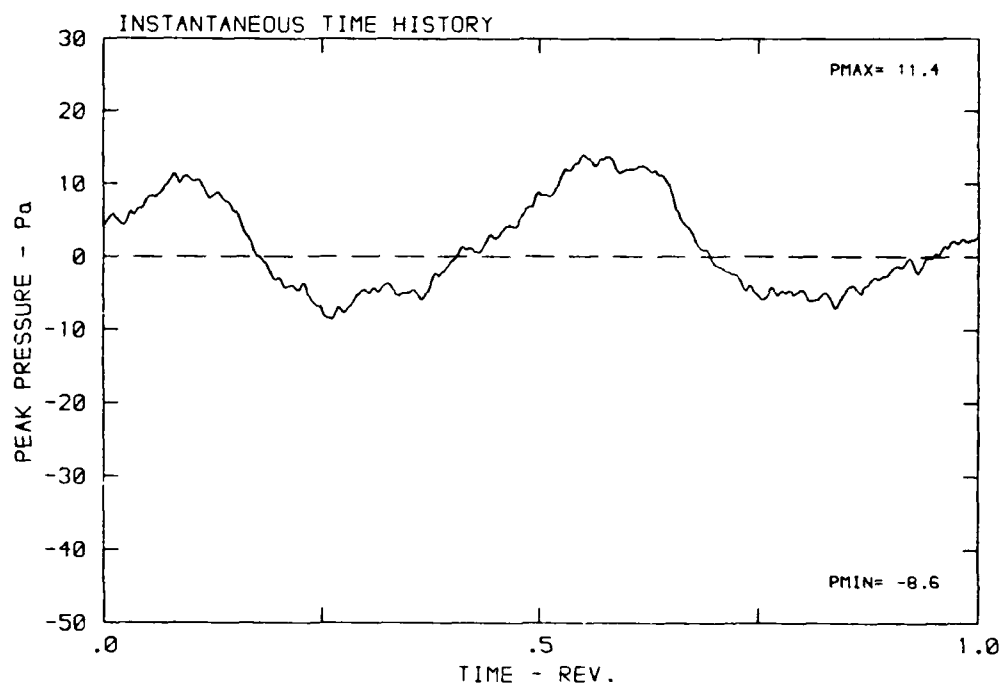
DATA POINT: EN-1 RUN: 163 MP: 6

β : 19.9° MH: .6764 n: 2100 rpm v/u: .230 ϕ : 7.3° T: 285.8 K



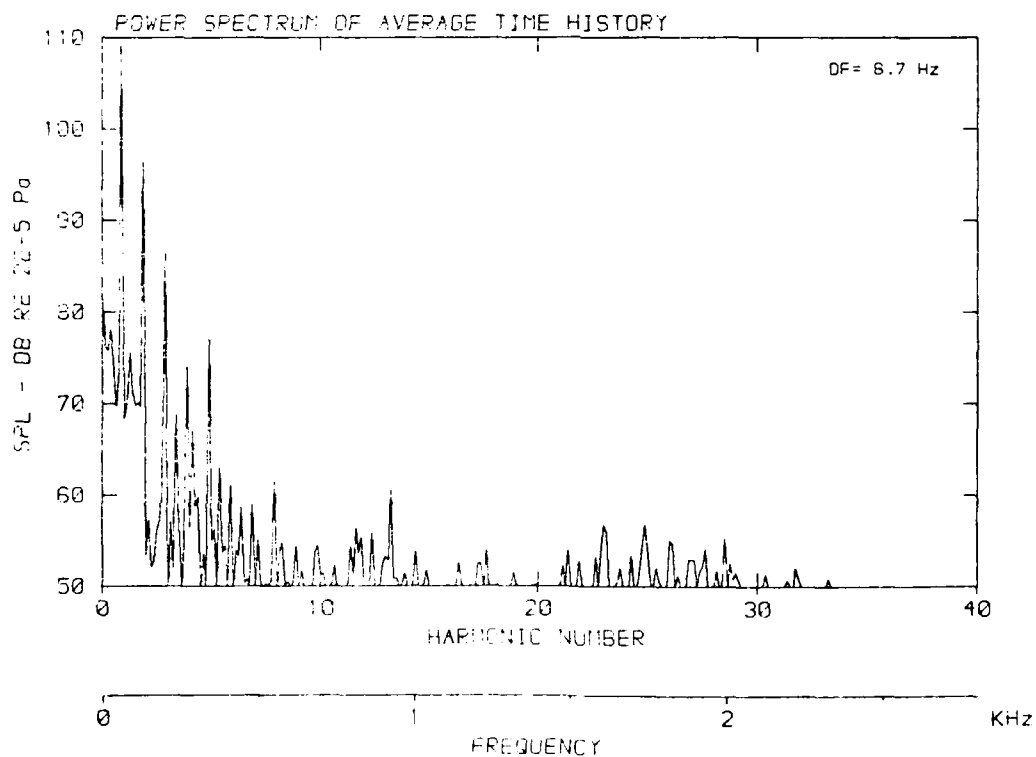
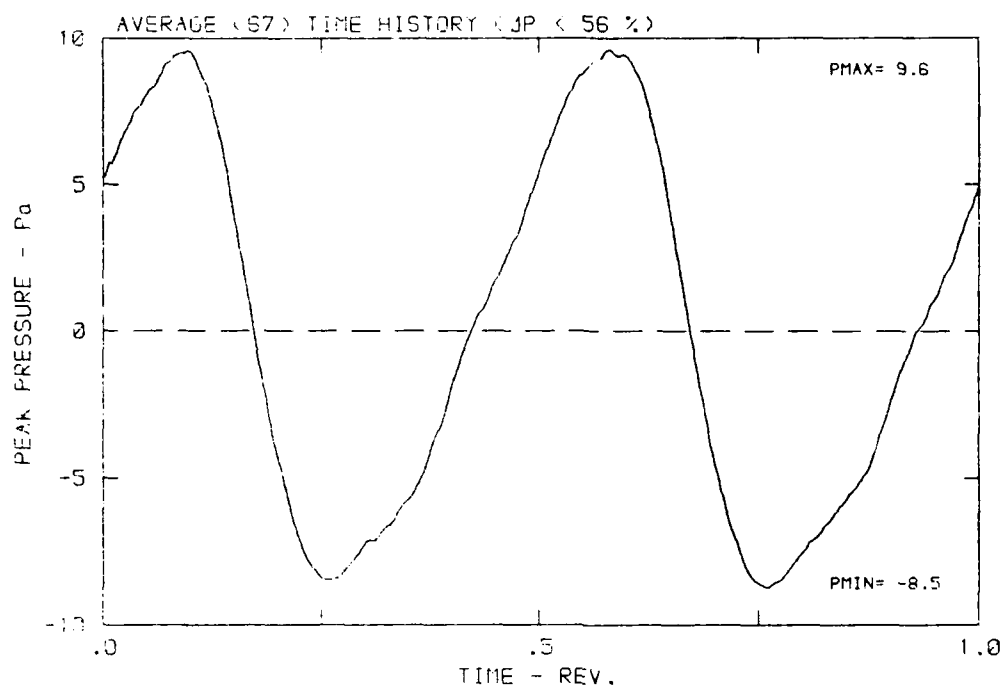
DATA POINT: EN-1 RUN: 163 MP: 7

β : 19.9° MH: .6764 n: 2100 rpm v/u : .230 ϕ : 7.3° T: 285.8 K



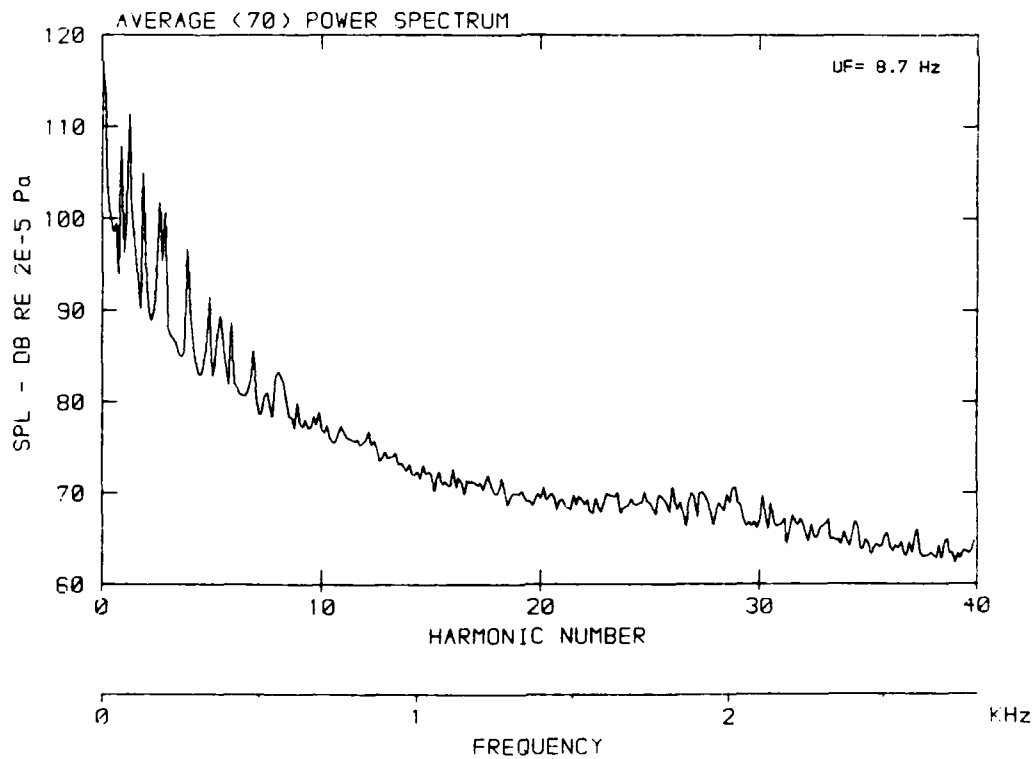
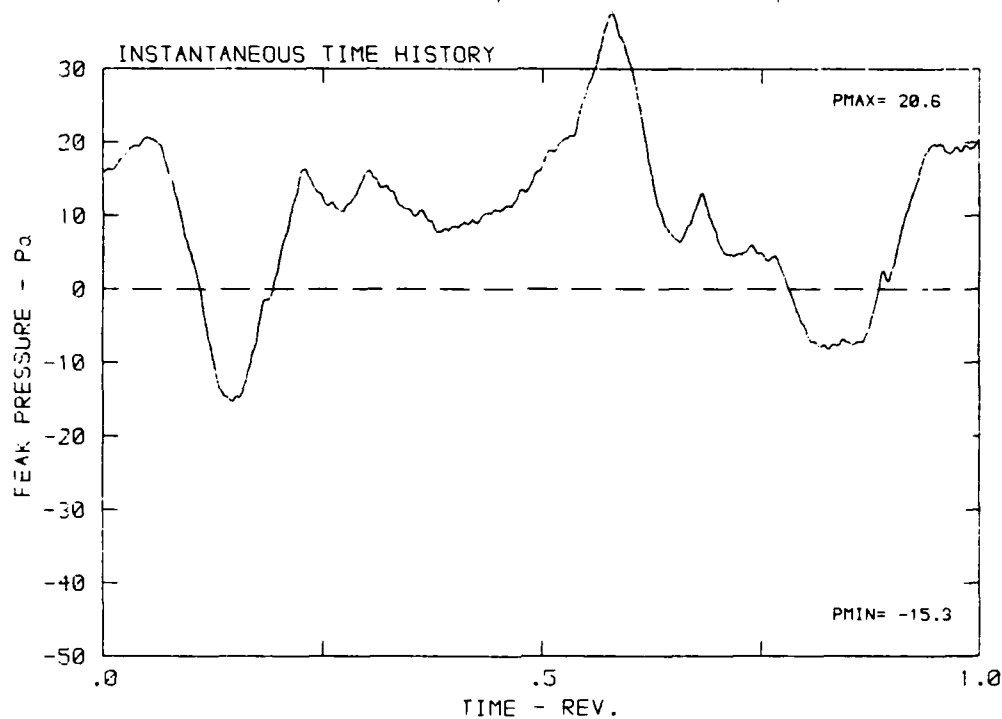
DATA POINT: EN-1 RUN: 163 MP: 7

β : 19.9° MH: .6764 n: 2100 rpm v/u : .230 ϕ : 7.3° T: 285.8 K



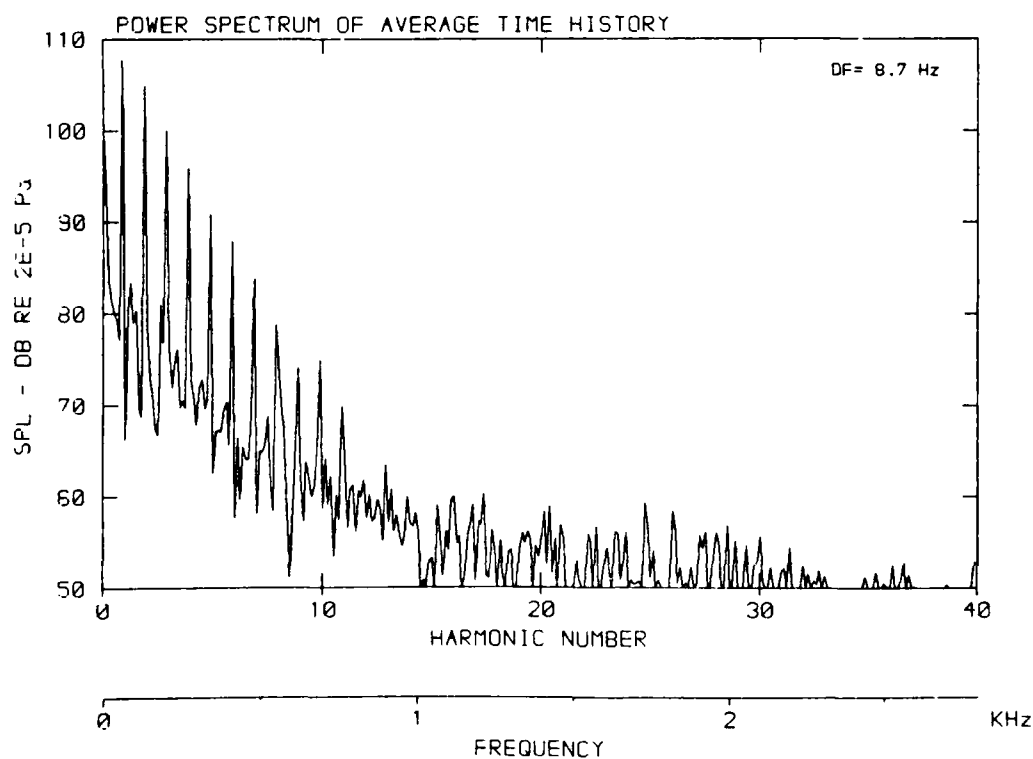
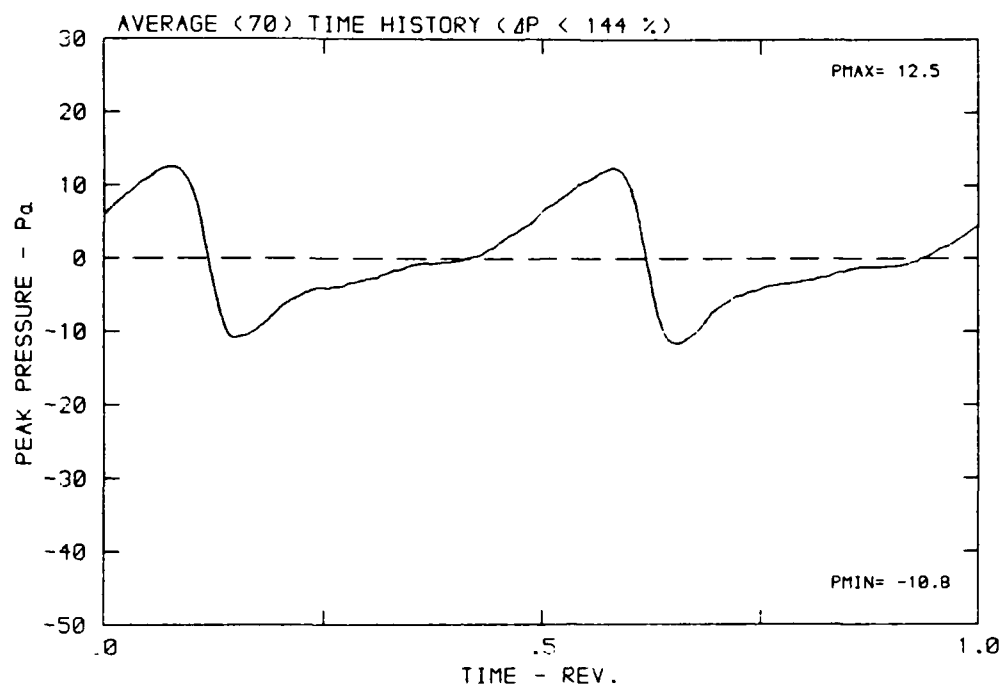
DATA POINT: EN-1 RUN: 163 MP: 8

p: 19.9° MH: .6764 n: 2100 rpm v/u: .230 ϕ : 7.3° T: 285.8 K



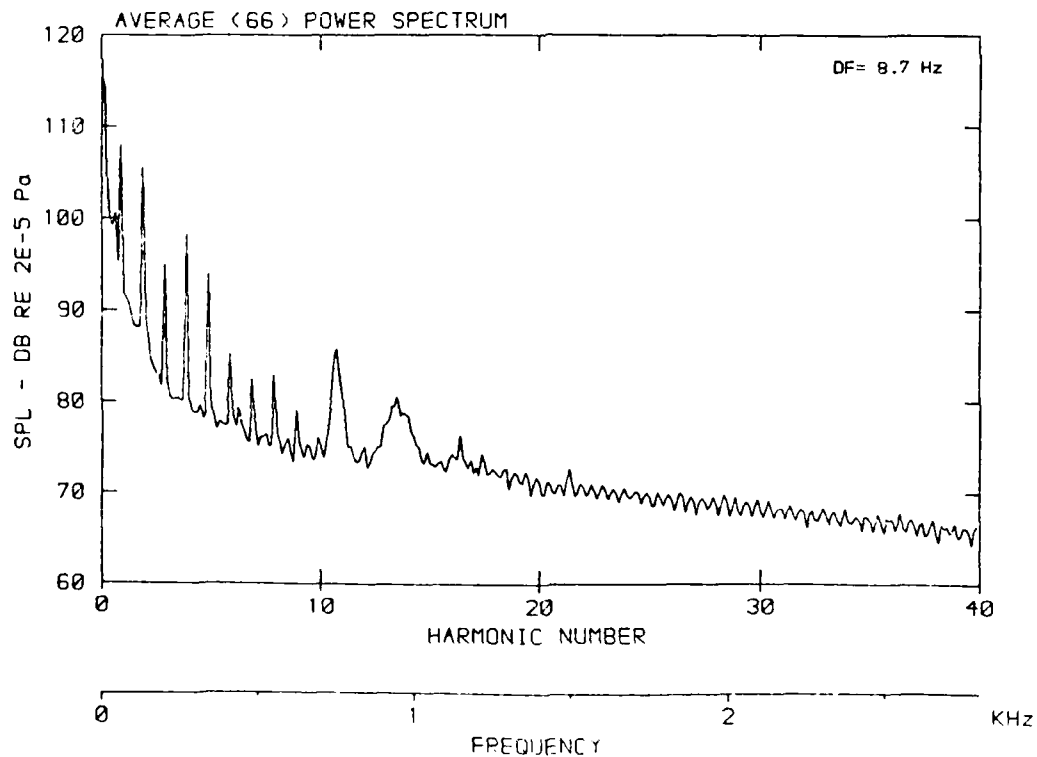
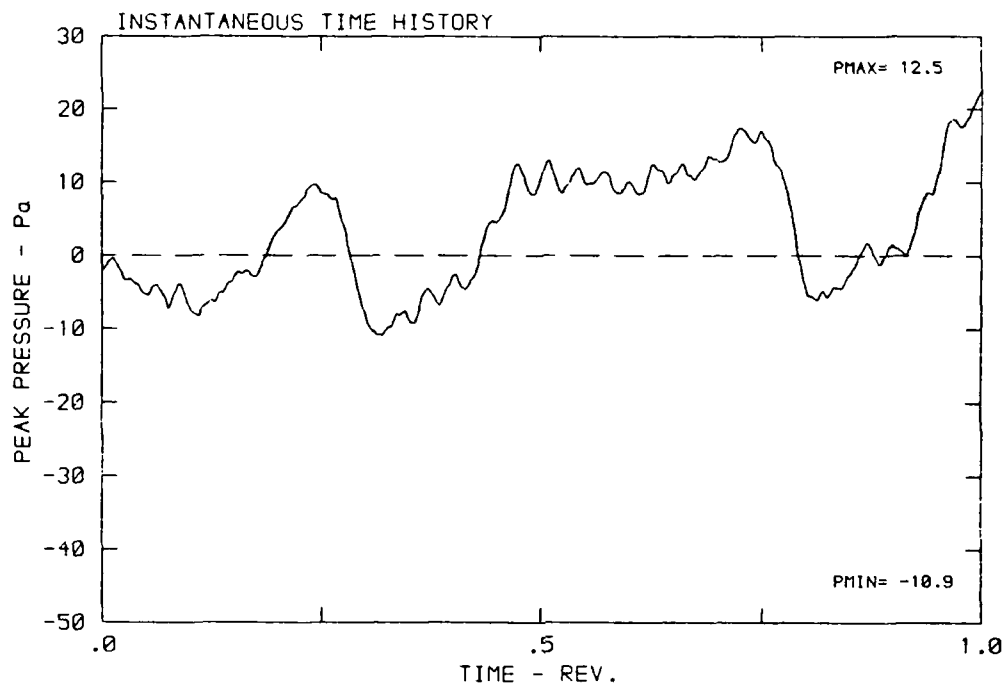
DATA POINT: EN-1 RUN: 163 MP: 8

β : 19.9° MH: .6764 n: 2100 rpm v/u: .230 ϕ : 7.3° T: 285.8 K



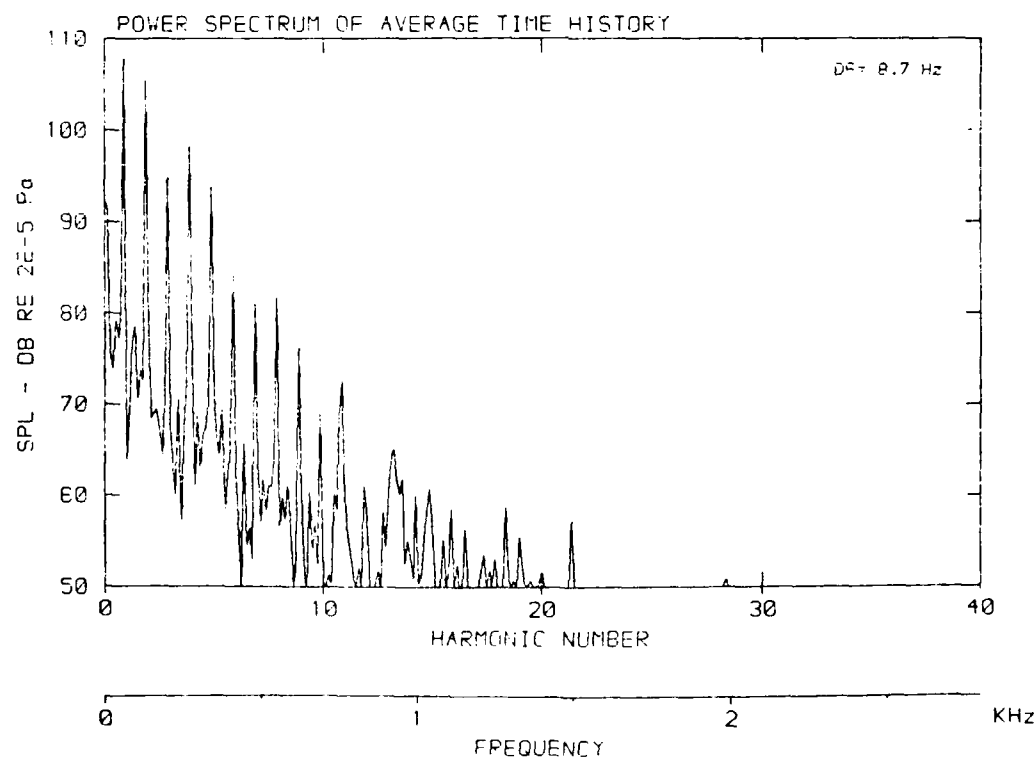
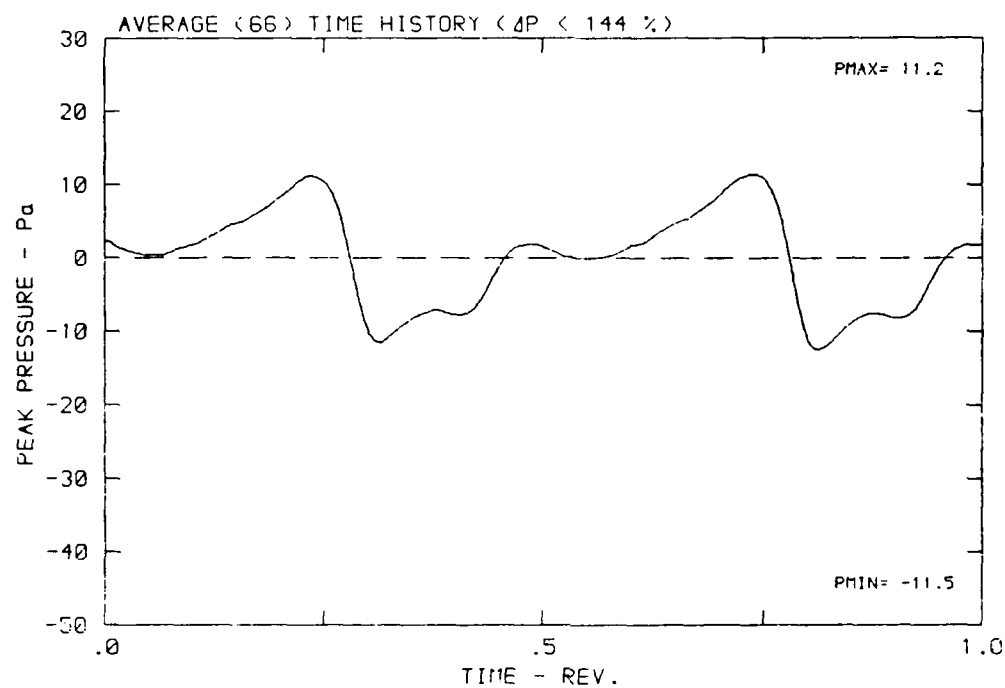
DATA POINT: EN-1 RUN: 163 MP: 9

β : 19.9° MH: .6764 n: 2100 rpm v/u : .230 ϕ : 7.3° T: 285.3 K



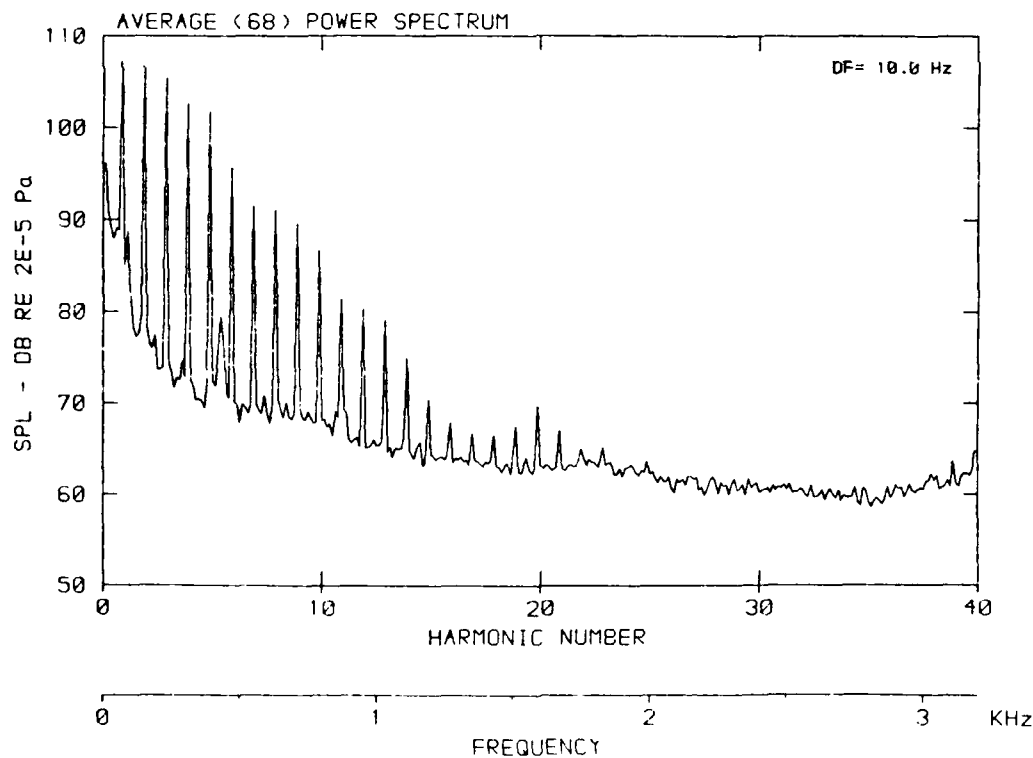
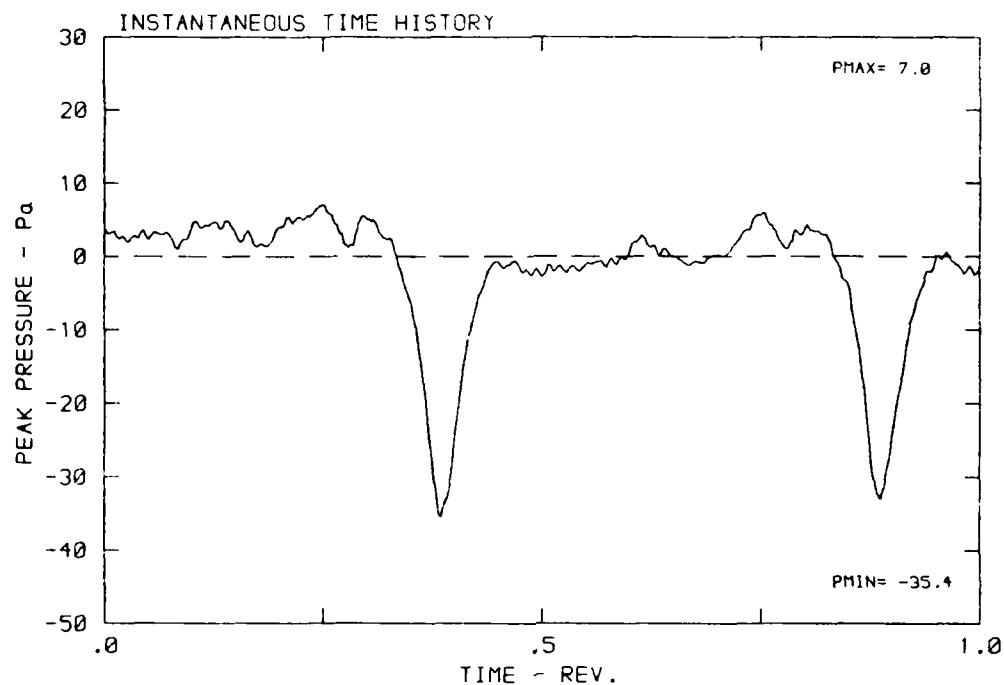
DATA POINT: EN-1 RUN: 163 MP: 9

β : 19.9° MH: .6764 n: 2100 rpm v/u: .230 ϕ : 7.3° T: 285.8 K



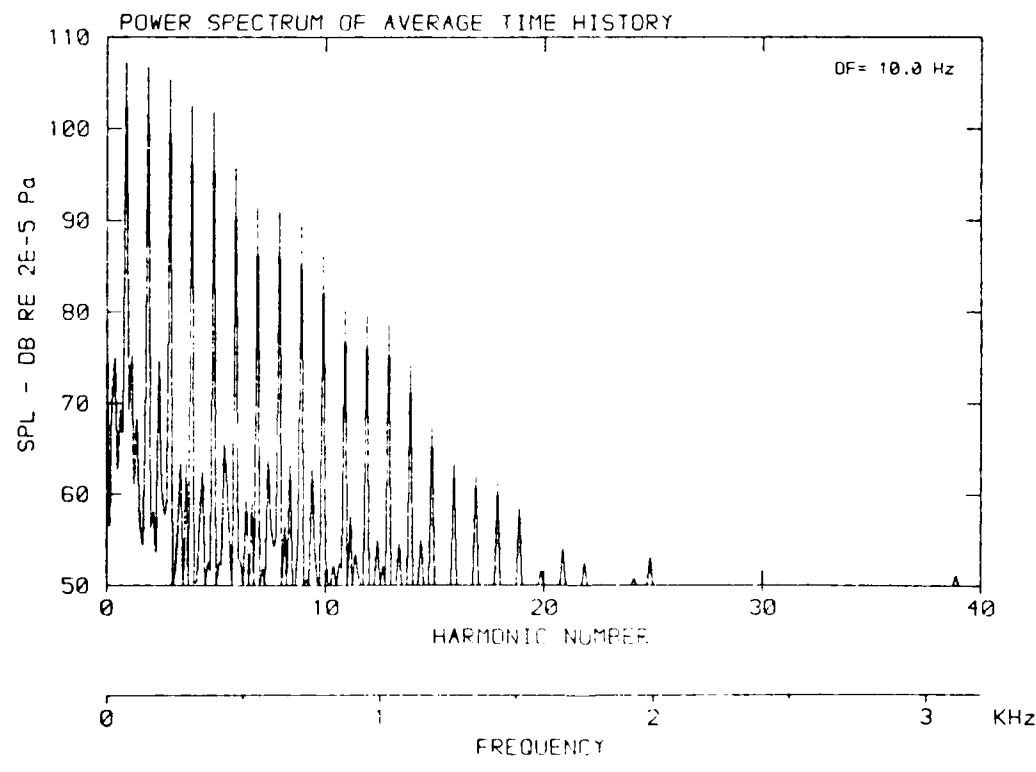
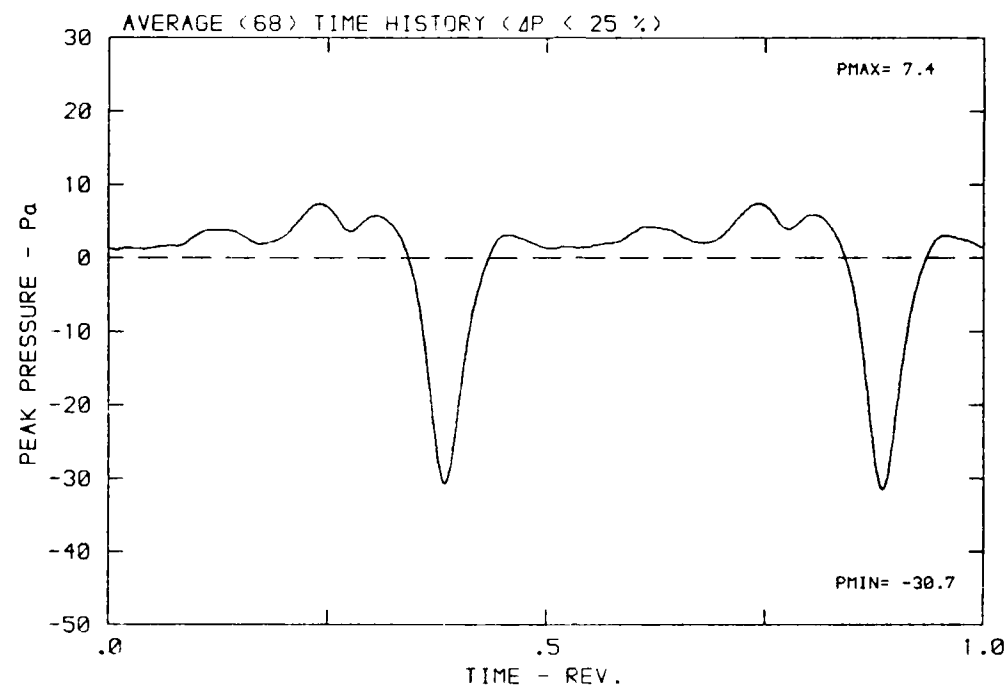
DATA POINT: EN-2 RUN: 164 MP: 1

β : 19.9° MH: .7677 n: 2400 rpm v/u: .203 ϕ : 7.3° T: 286.6 K



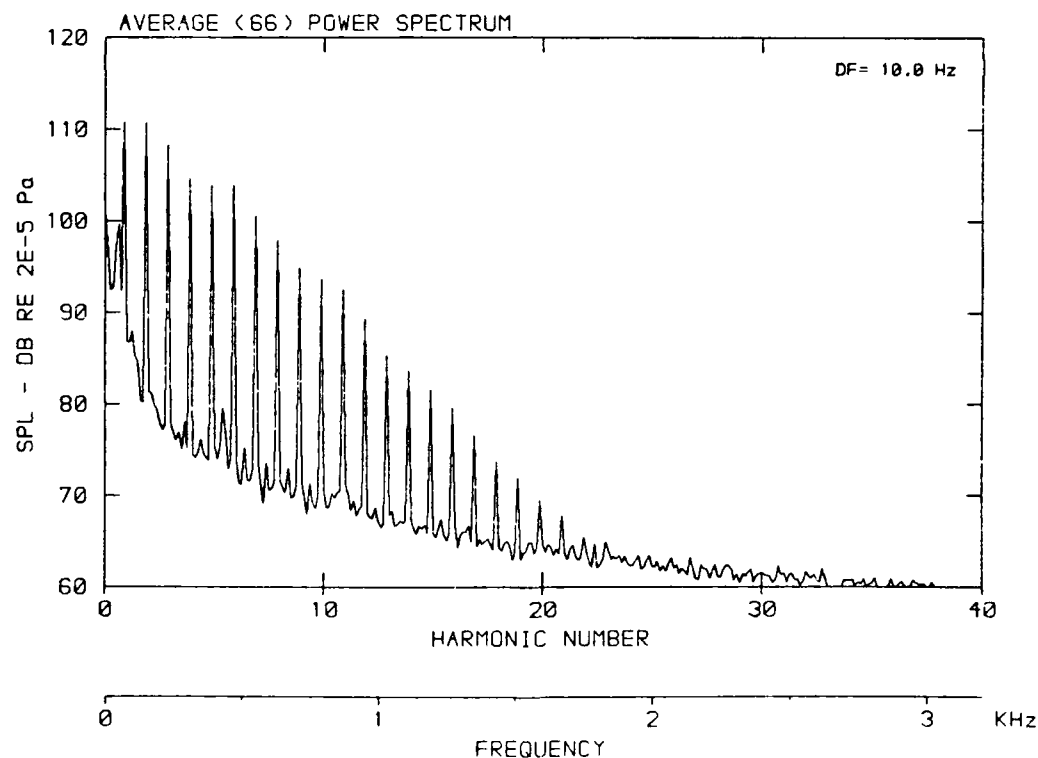
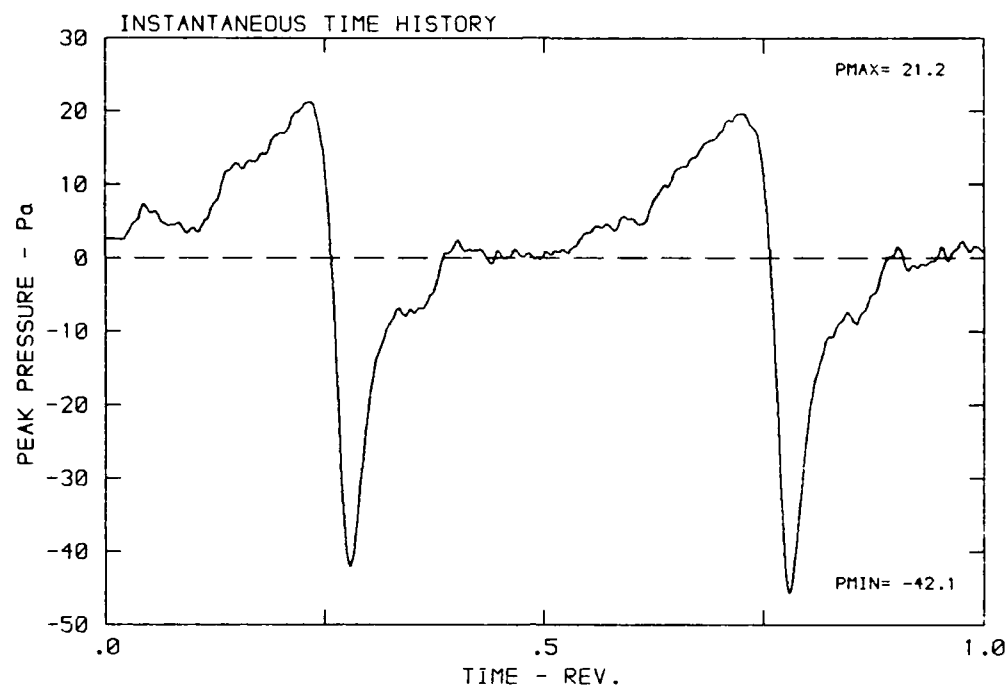
DATA POINT: EN-2 RUN: 164 MP: 1

β : 19.9° MH: .7677 n: 2400 rpm v/u: .203 ϕ : 7.3° T: 286.6 K



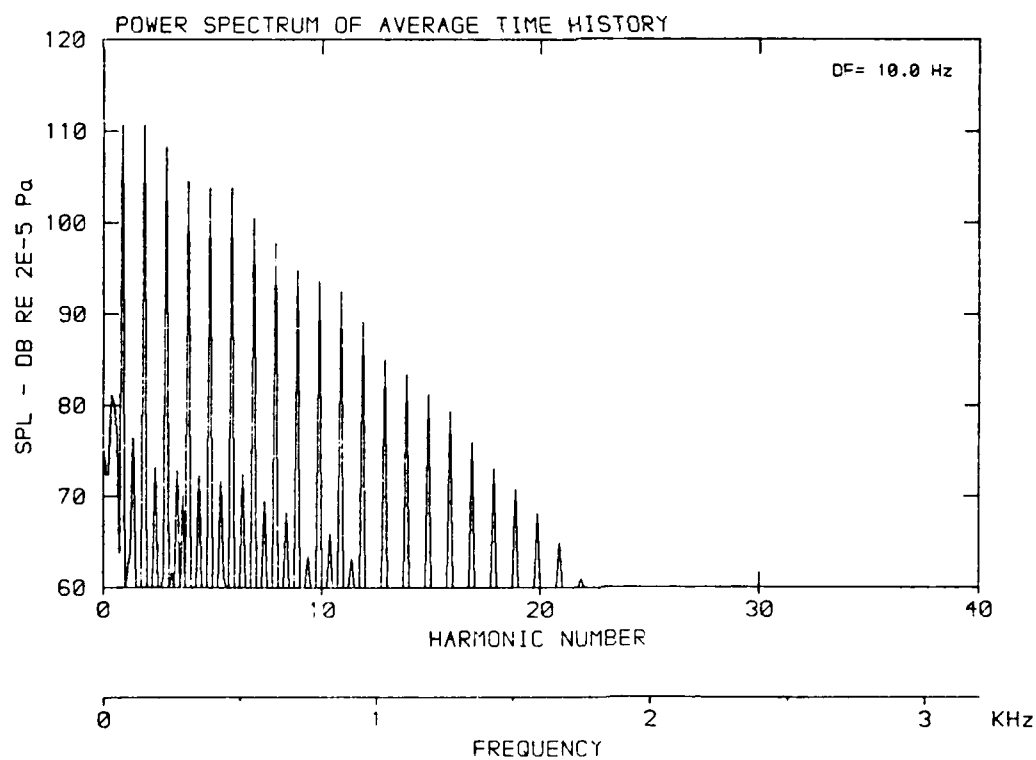
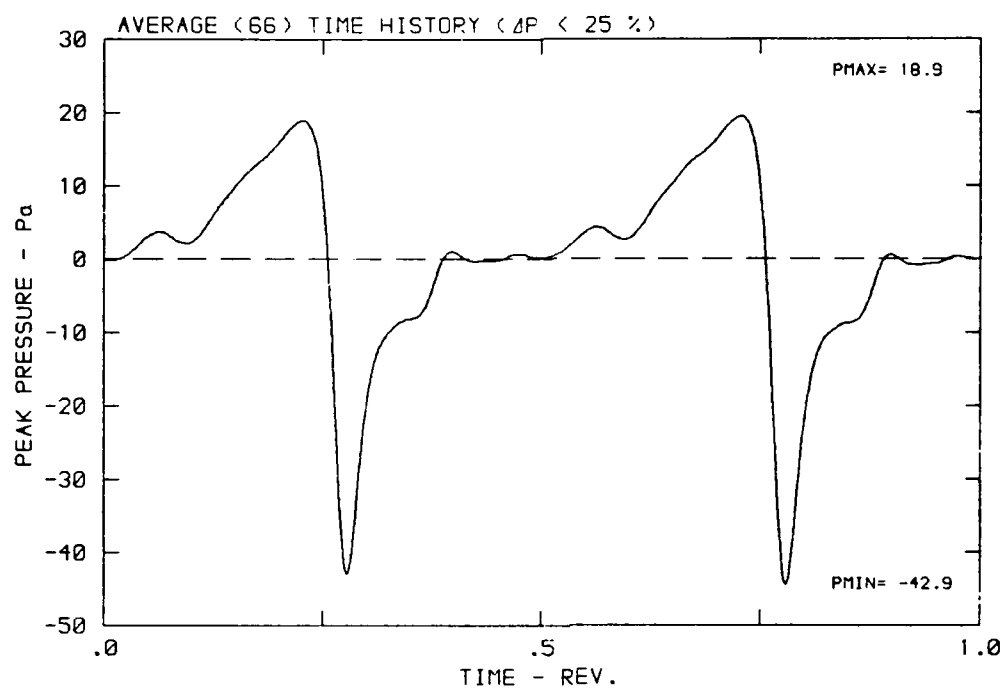
DATA POINT: EN-2 RUN: 164 MP: 2

β : 19.9° MH: .7677 n: 2400 rpm v/u : .203 ϕ : 7.3° T: 286.6 K



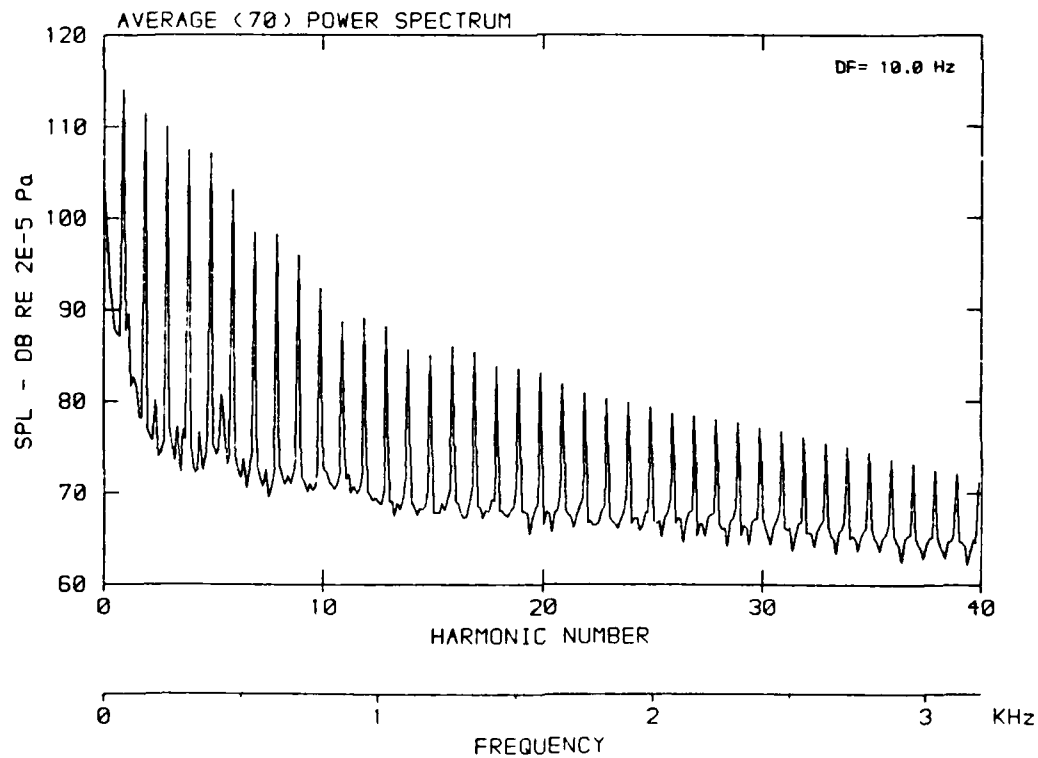
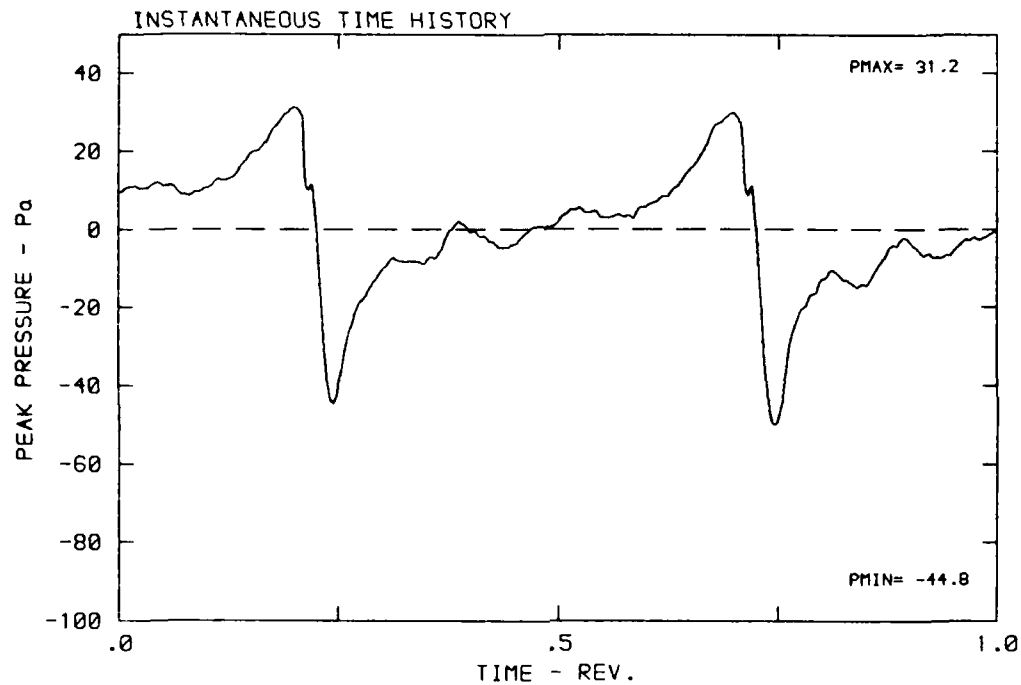
DATA POINT: EN-2 RUN: 164 MP: 2

β : 19.9° MH: .7677 n: 2400 rpm v/u: .203 ϕ : 7.3° T: 286.6 K



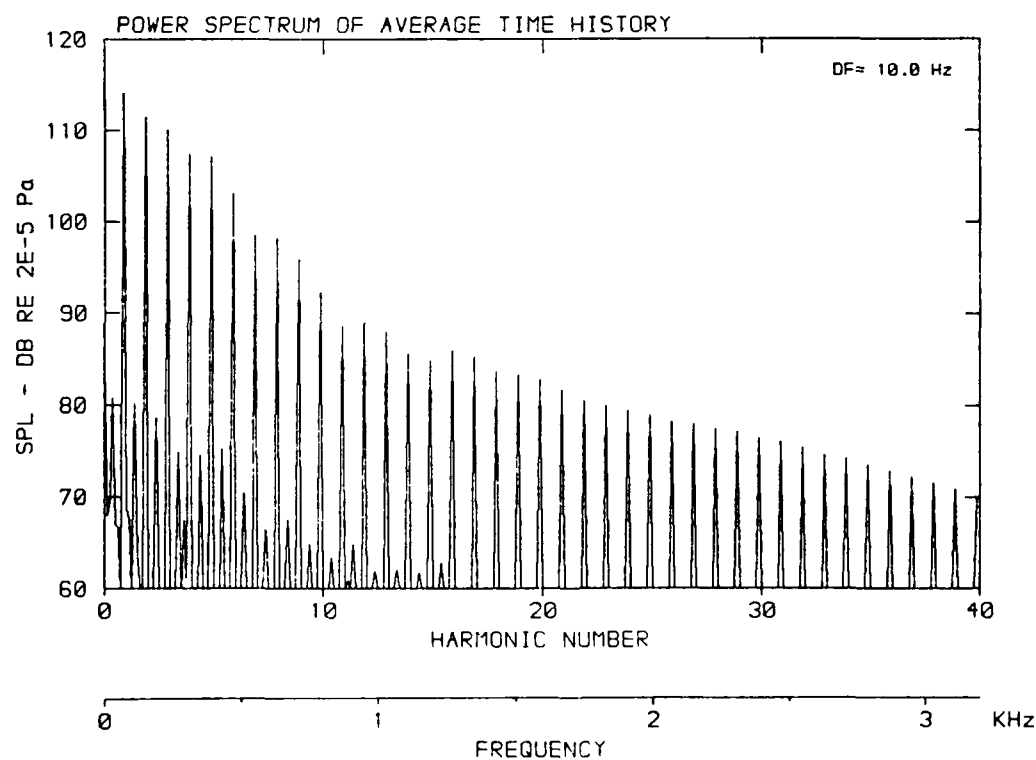
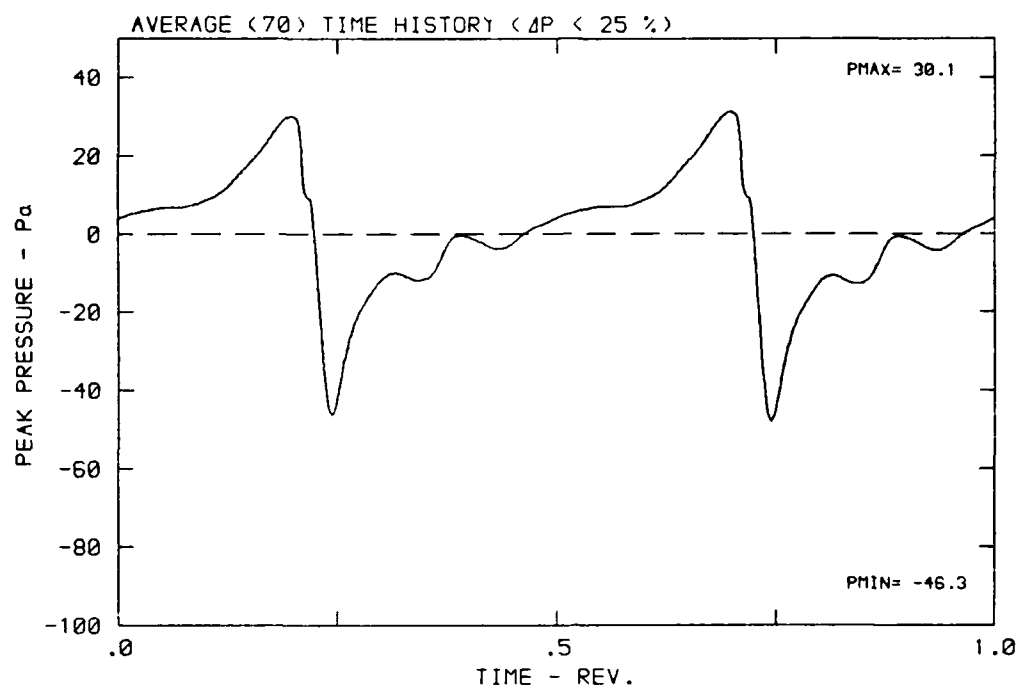
DATA POINT: EN-2 RUN: 164 MP: 3

β : 19.9° MH: .7677 n: 2400 rpm v/u: .203 ϕ : 7.3° T: 286.6 K



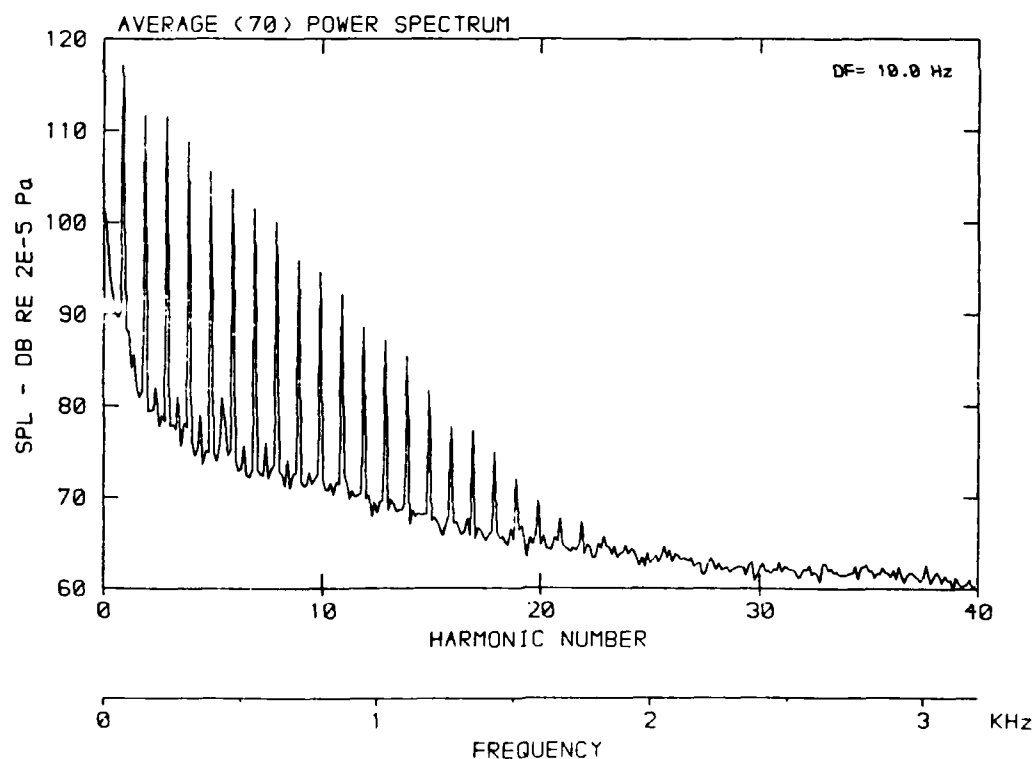
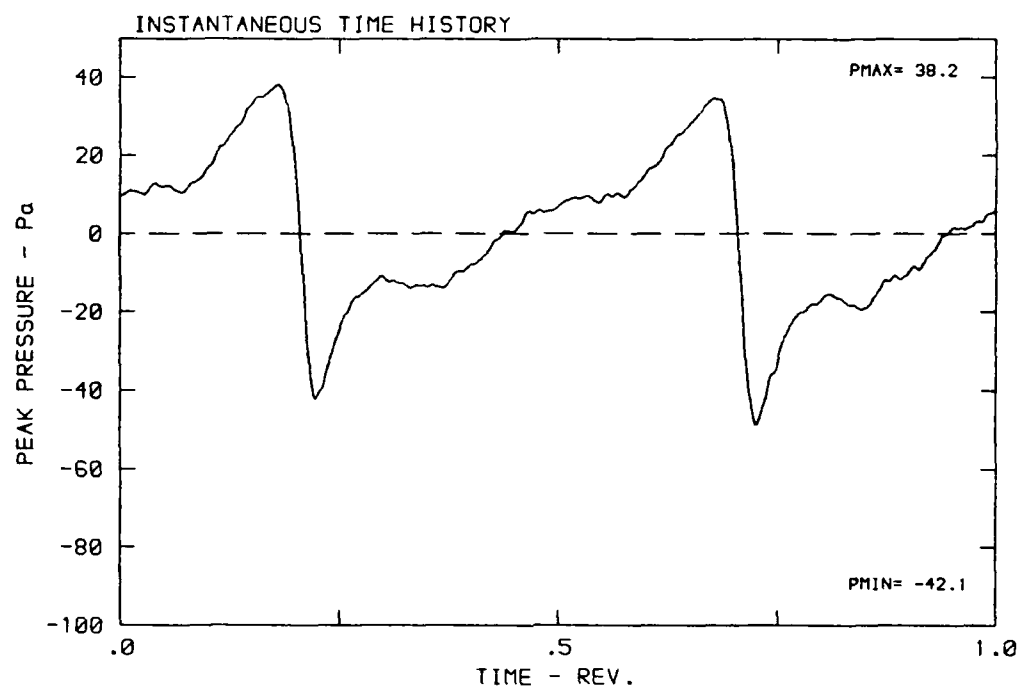
DATA POINT: EN-2 RUN: 164 MP: 3

β : 19.9° MH: .7677 n: 2400 rpm v/u : .203 ϕ : 7.3° T: 286.6 K



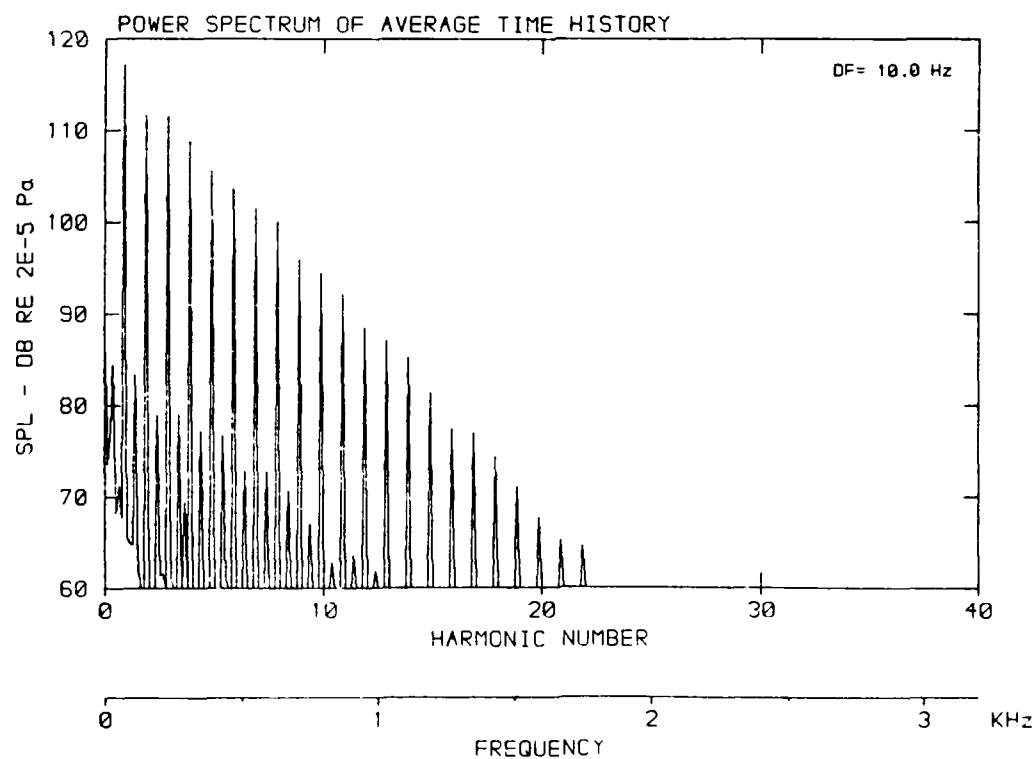
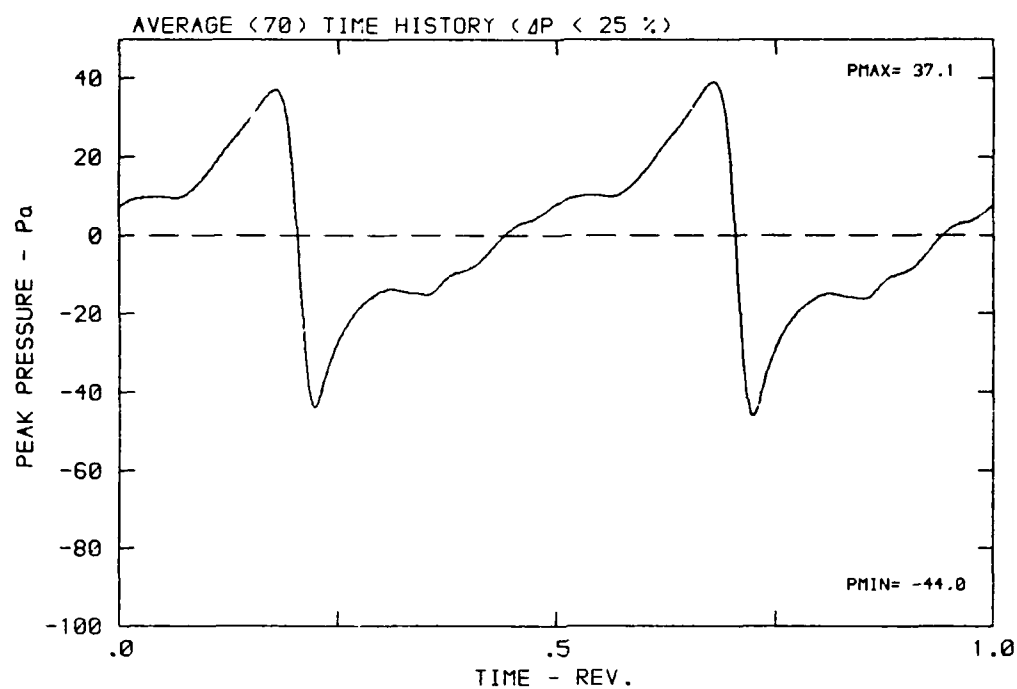
DATA POINT: EN-2 RUN: 164 MP: 4

β : 19.9° MH: .7677 n: 2400 rpm v/u : .203 ϕ : 7.3° T: 286.6 K



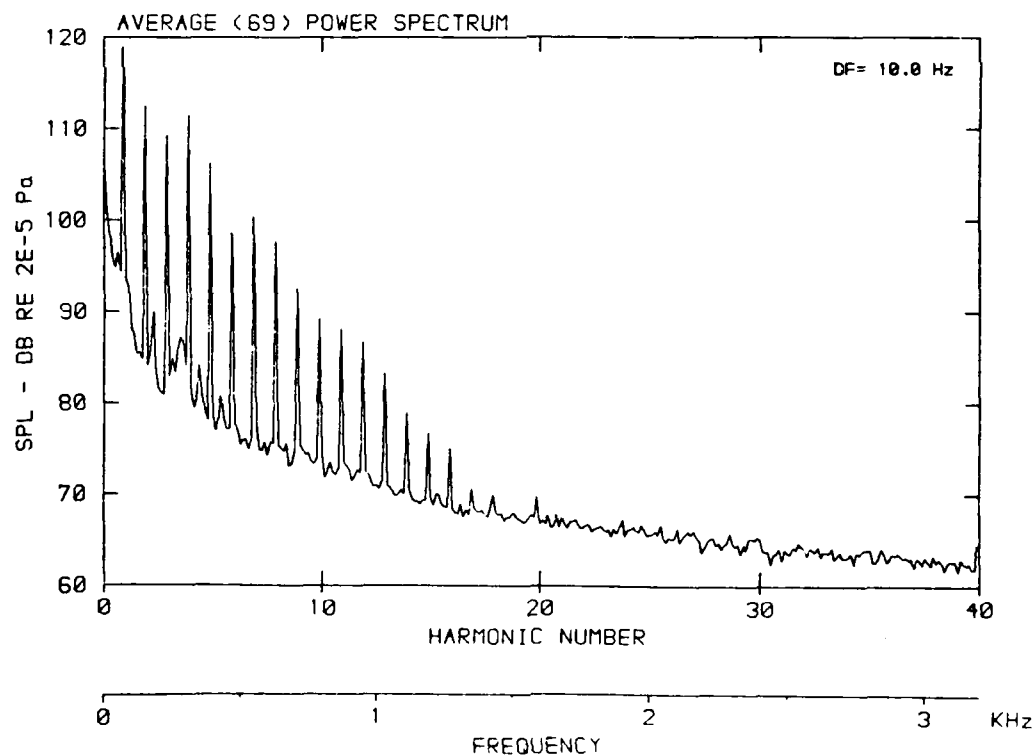
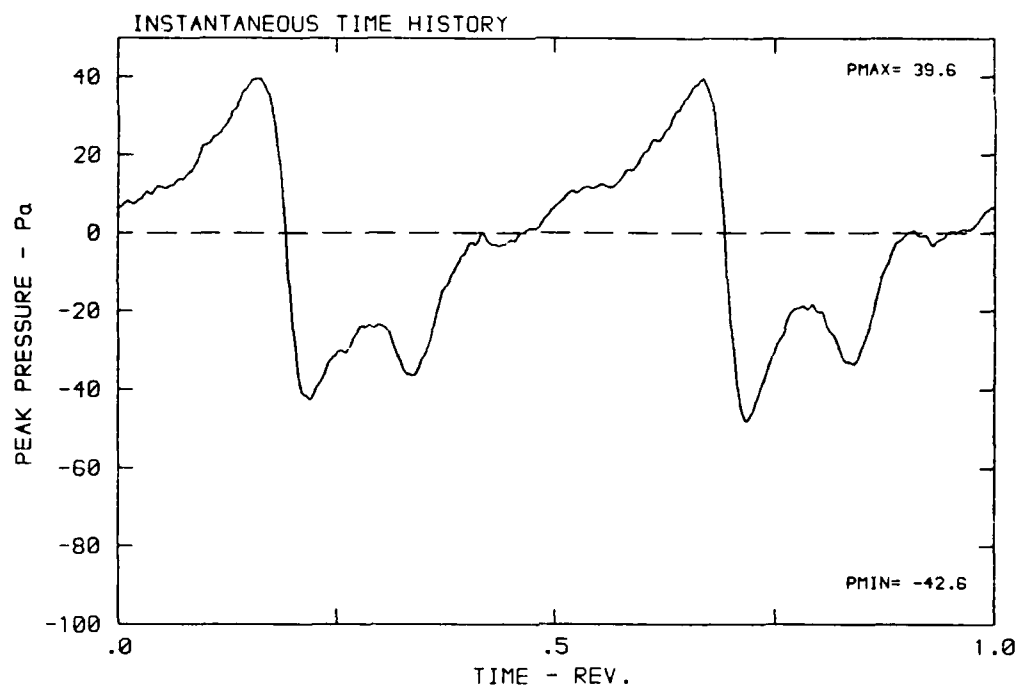
DATA POINT: EN-2 RUN: 164 MP: 4

β : 19.9° MH: .7677 n: 2400 rpm v/u: .203 ϕ : 7.3° T: 286.6 K



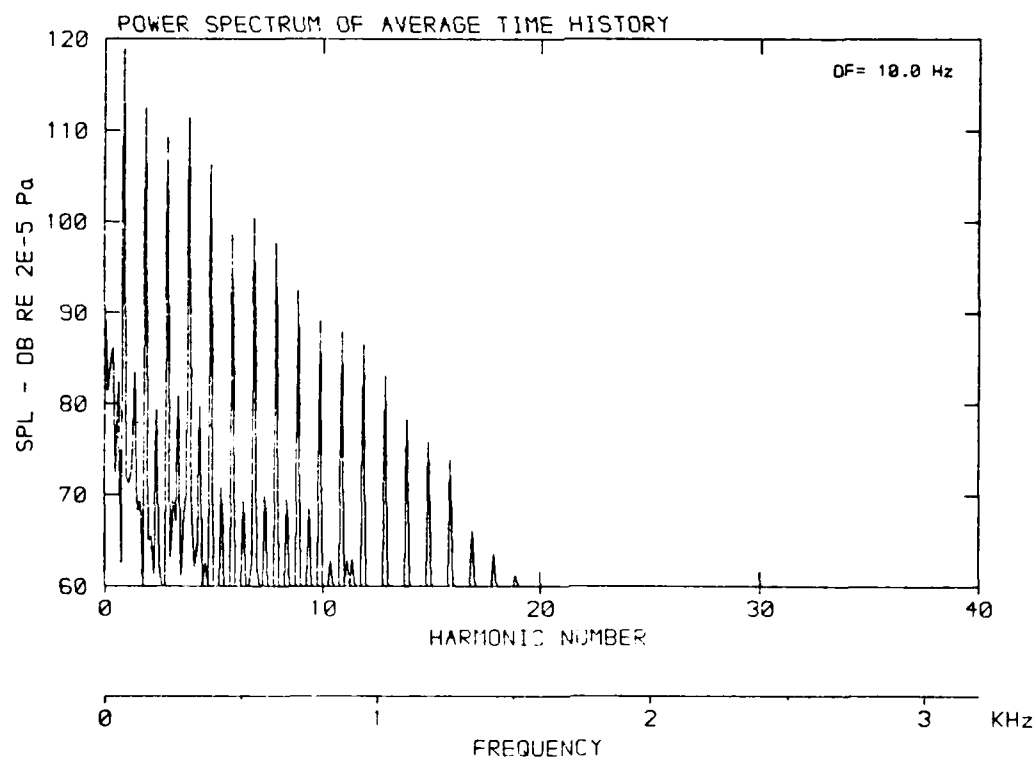
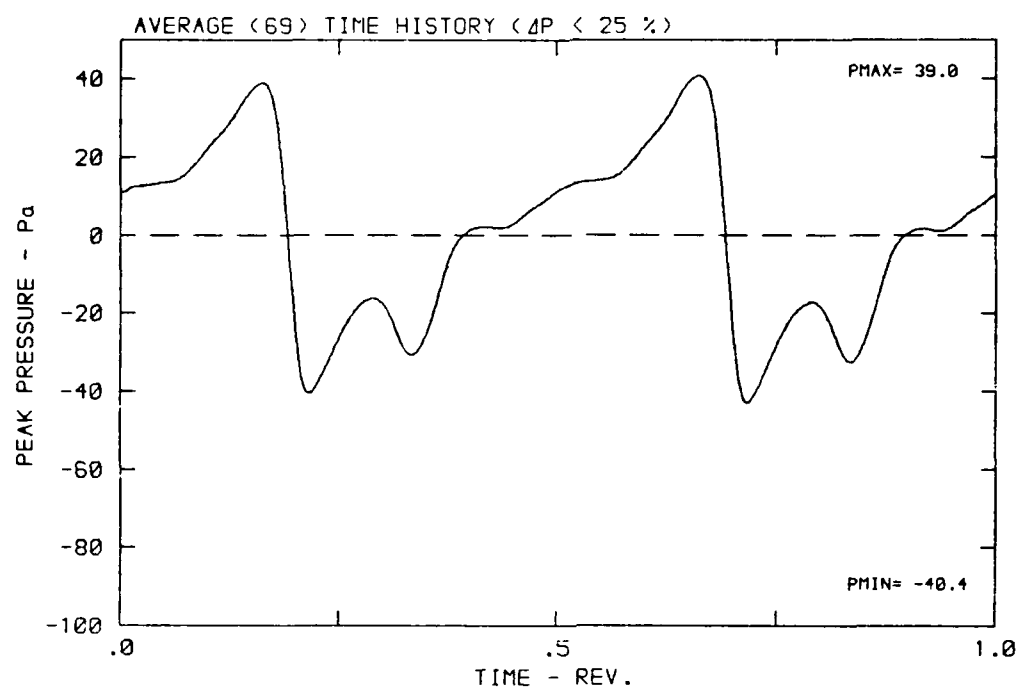
DATA POINT: EN-2 RUN: 164 MP: 5

β : 19.9° MH: .7677 n: 2400 rpm v/u: .203 ϕ : 7.3° T: 286.6 K



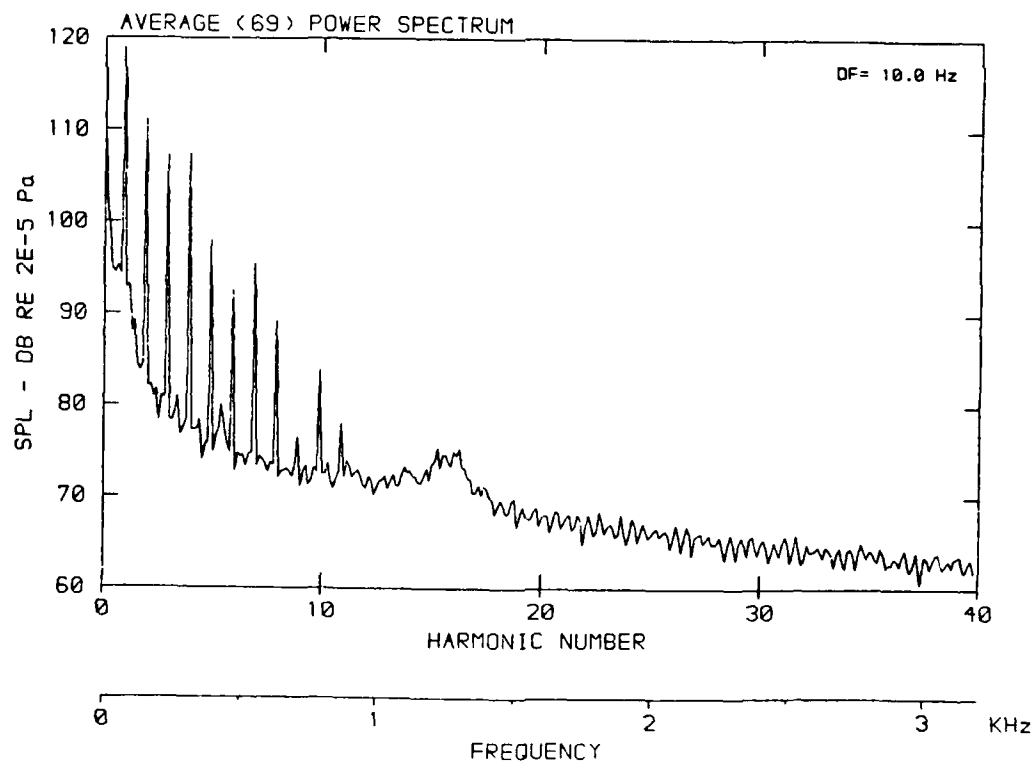
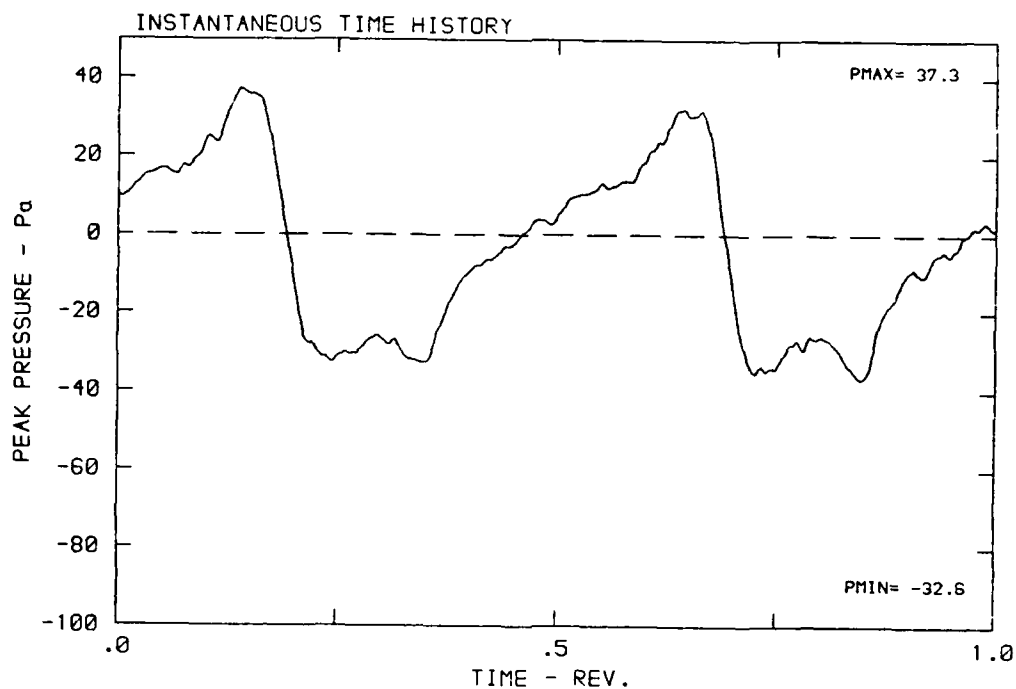
DATA POINT: EN-2 RUN: 164 MP: 5

β : 19.9° MH: .7677 n: 2400 rpm v/u : .203 ϕ : 7.3° T: 286.6 K



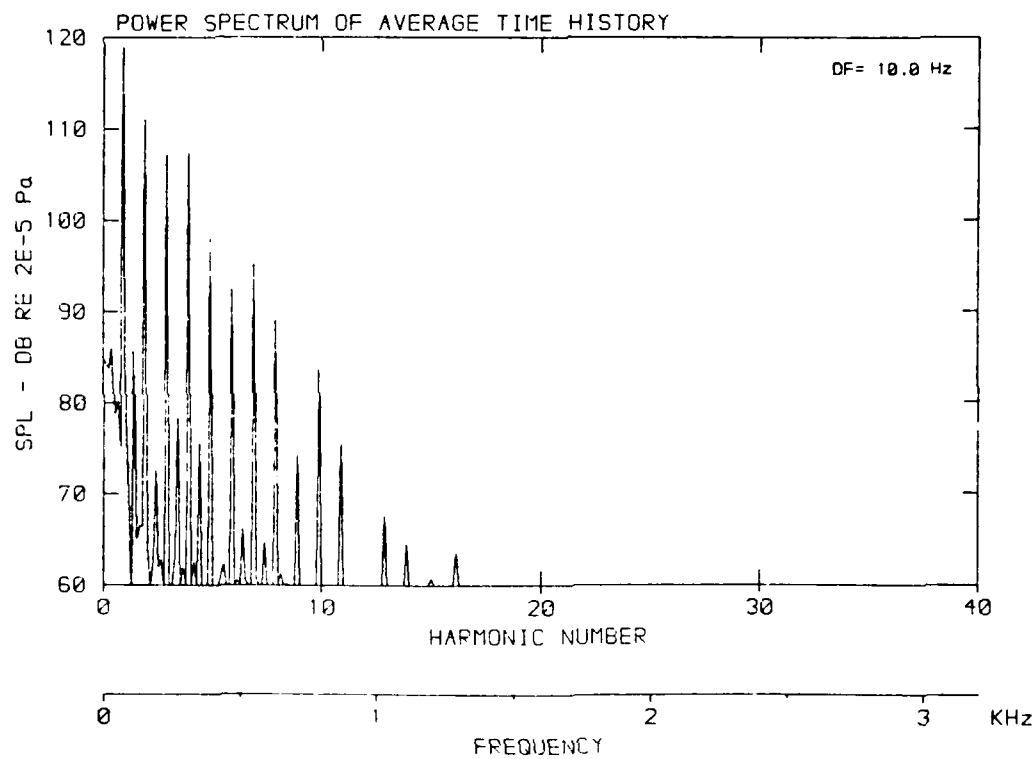
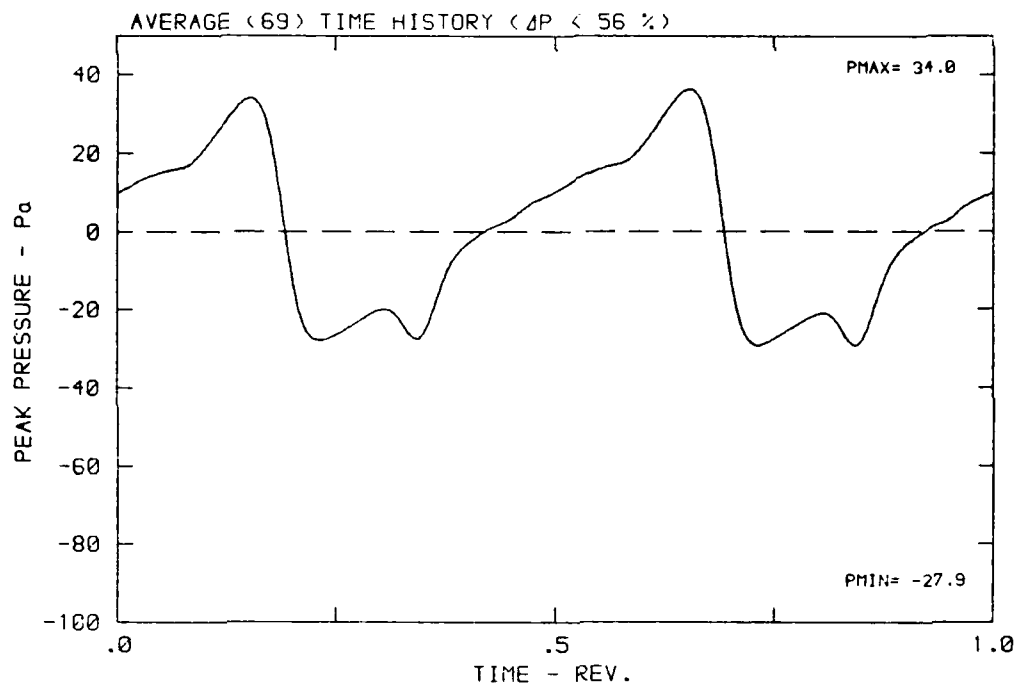
DATA POINT: EN-2 RUN: 164 MP: 6

β : 19.9° MH: .7677 n: 2400 rpm v/u : .203 ϕ : 7.3° T: 286.6 K



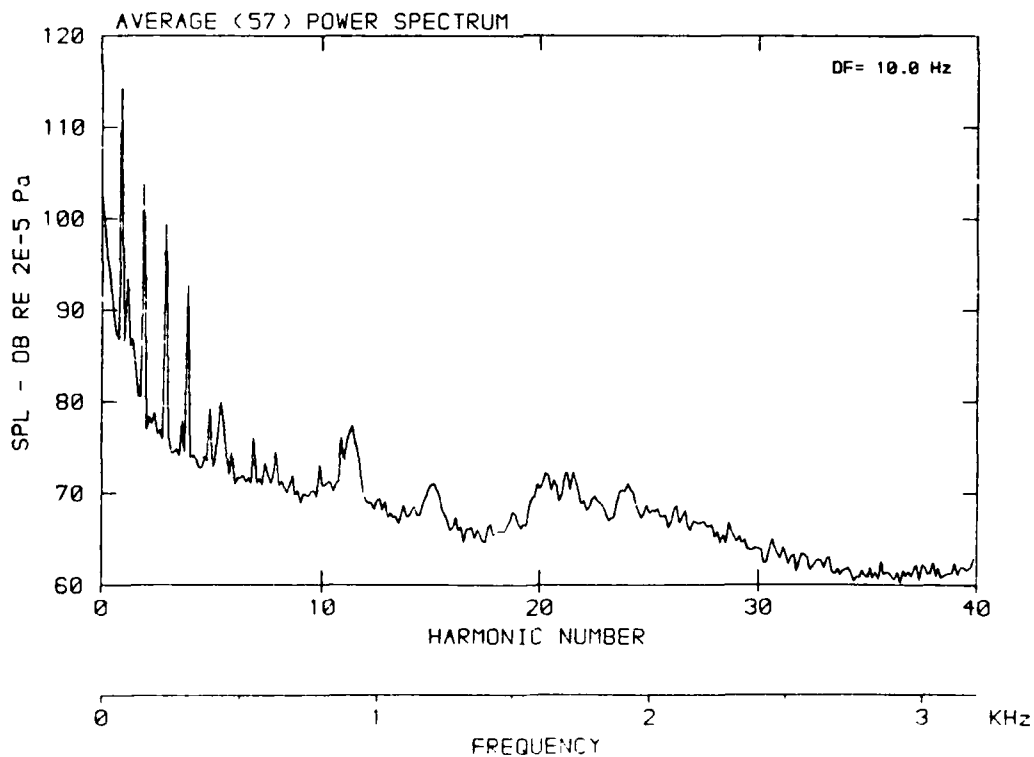
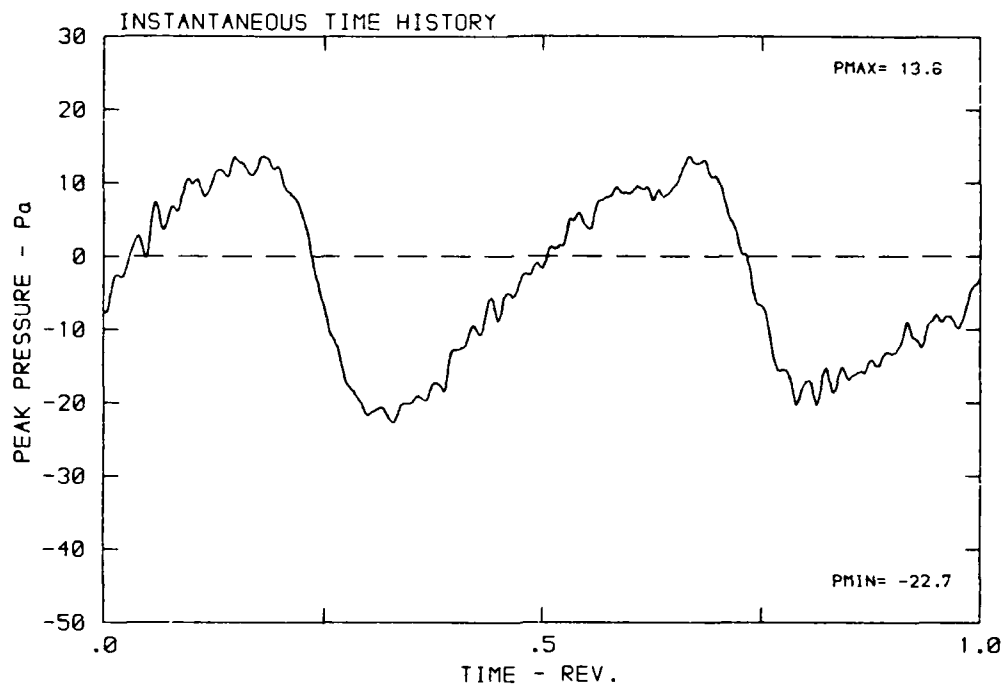
DATA POINT: EN-2 RUN: 164 MP: 6

β : 19.9° MH: .7677 n: 2400 rpm v/u: .203 ϕ : 7.3° T: 286.6 K



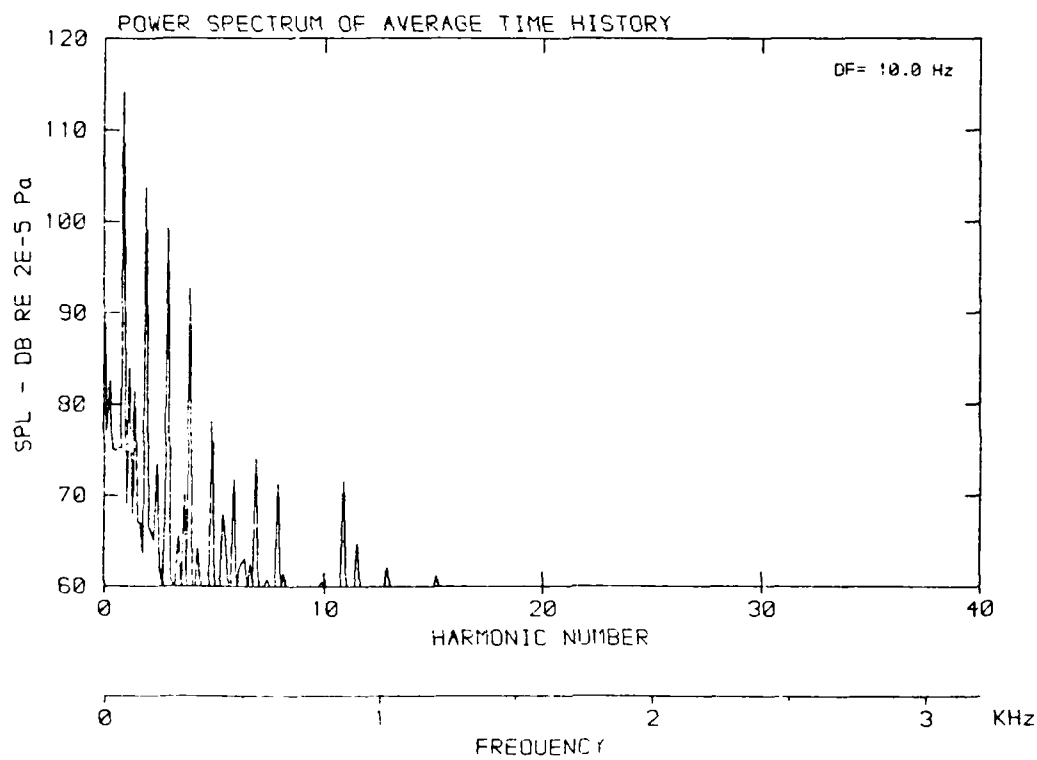
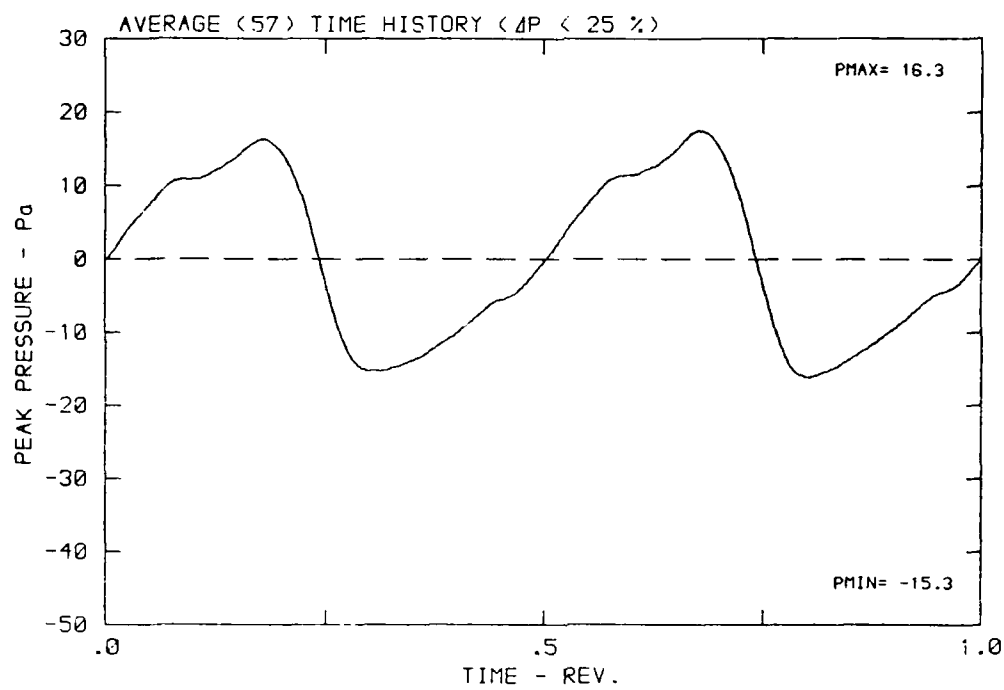
DATA POINT: EN-2 RUN: 164 MP: 7

β : 19.9° MH: .7677 n: 2400 rpm v/u: .203 ϕ : 7.3° T: 286.6 K



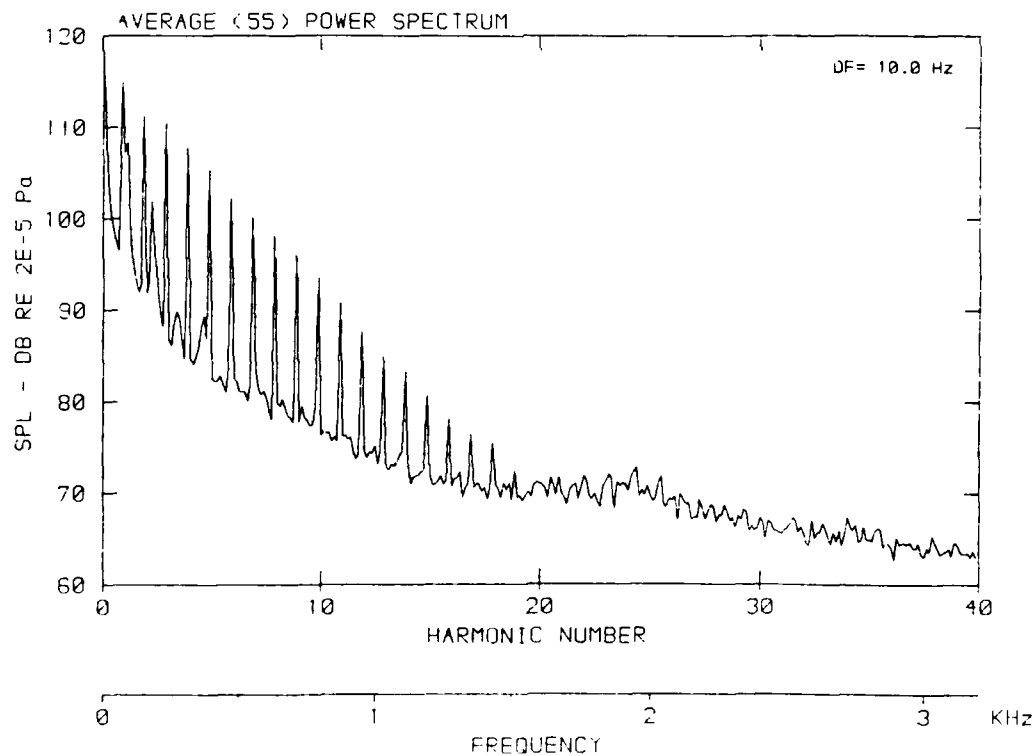
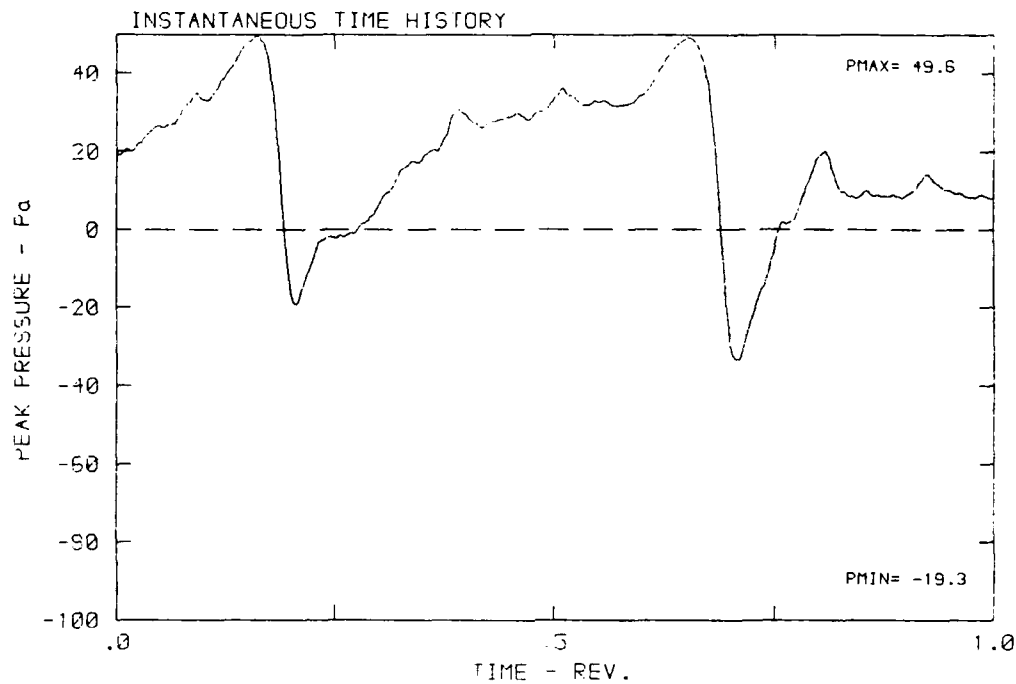
DATA POINT: EN-2 RUN: 164 MP: 7

β : 19.9° MH: .7677 n: 2400 rpm v/u: .203 ϕ : 7.3° T: 286.6 K



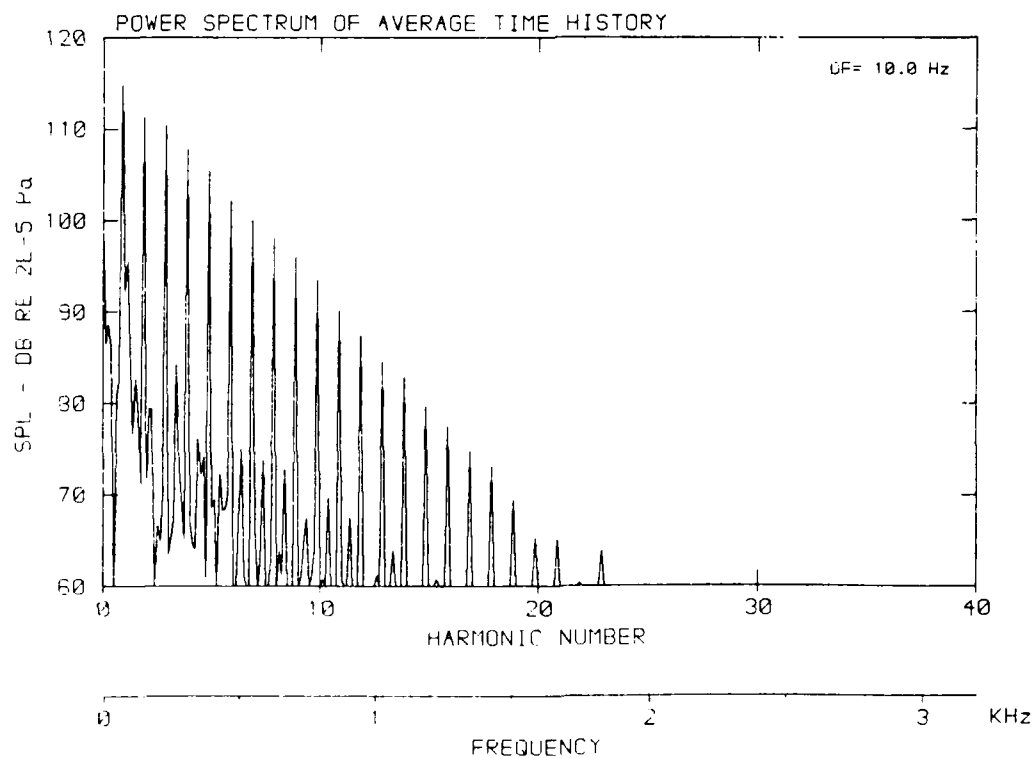
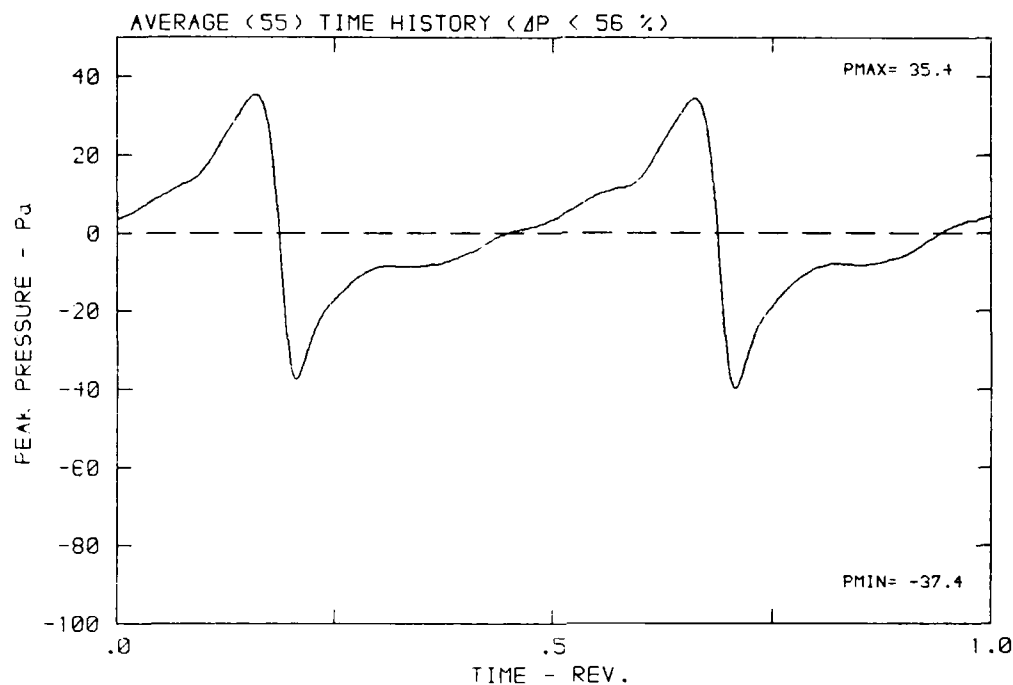
DATA POINT: EN-2 RUN: 164 MP: 8

\bar{p} : 19.9° MH: .7677 n: 2400 rpm v/u : .203 ϕ : 7.3° T: 285.3 K



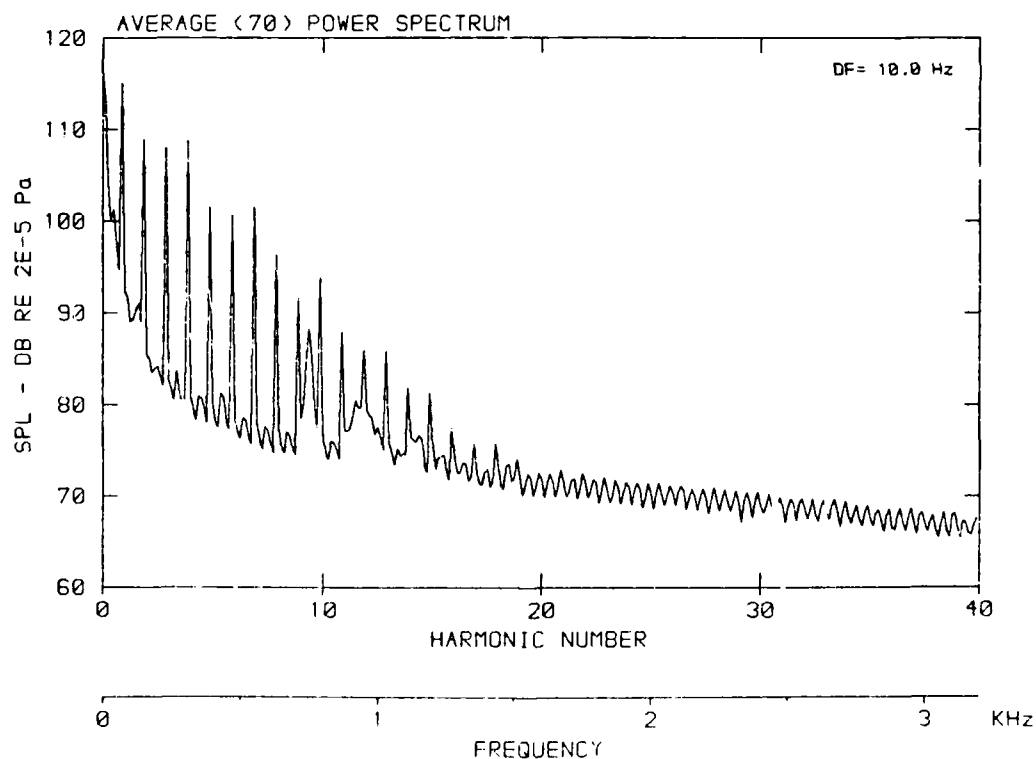
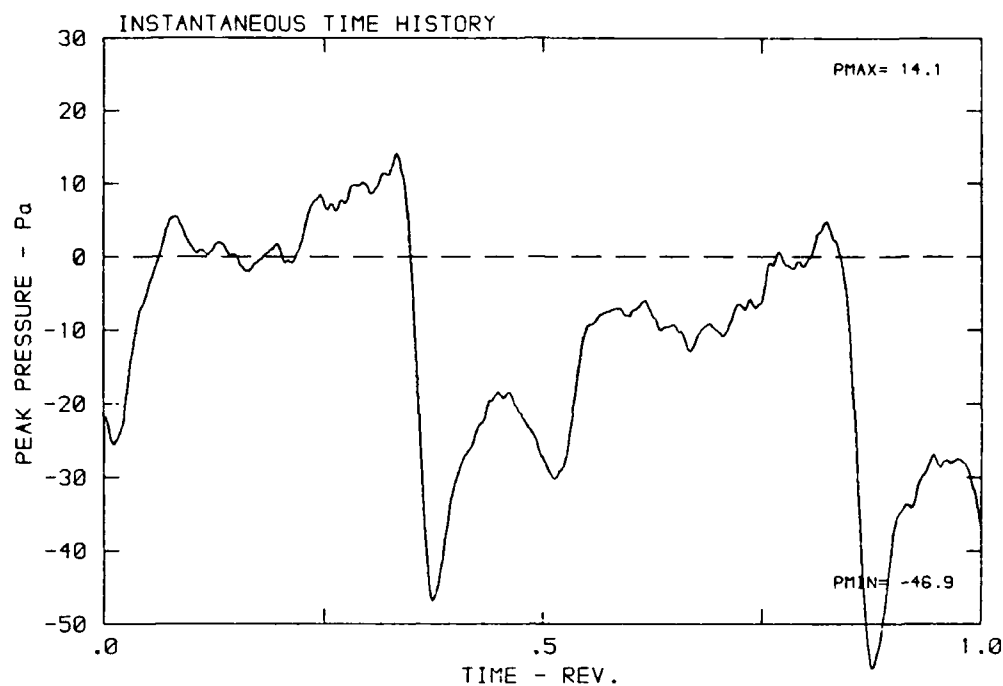
DATA POINT: EN-2 RUN: 164 MP: 8

β : 19.9° MH: .7677 n: 2400 rpm v/u : .203 ϕ : 7.3° T: 286.6 K



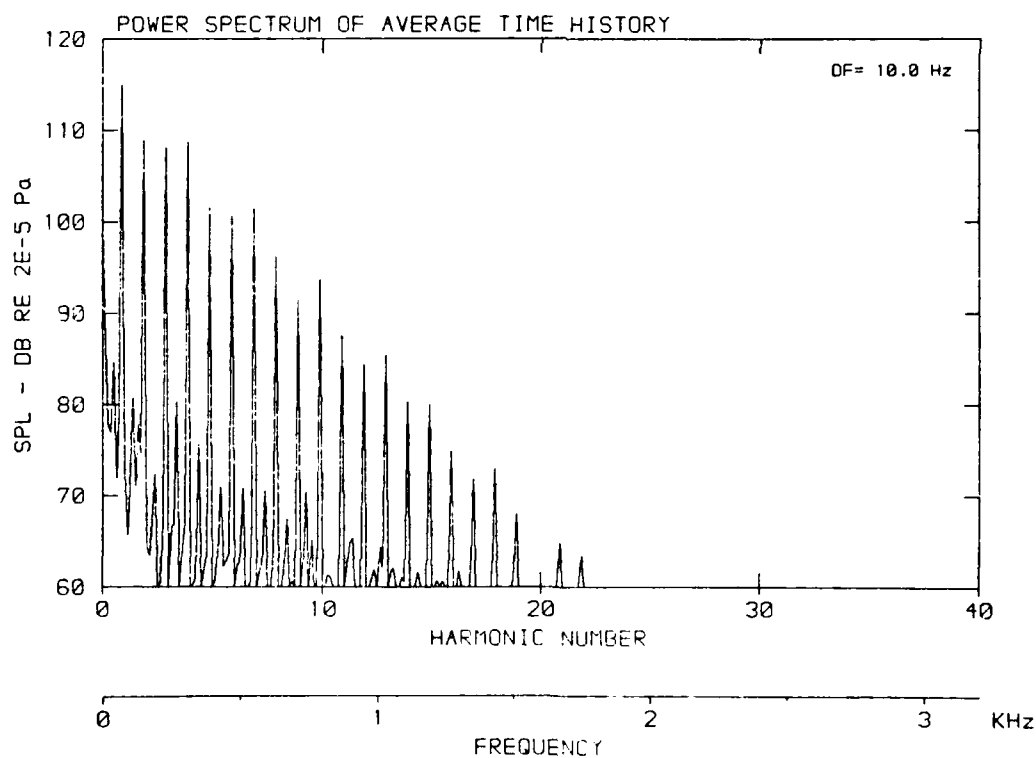
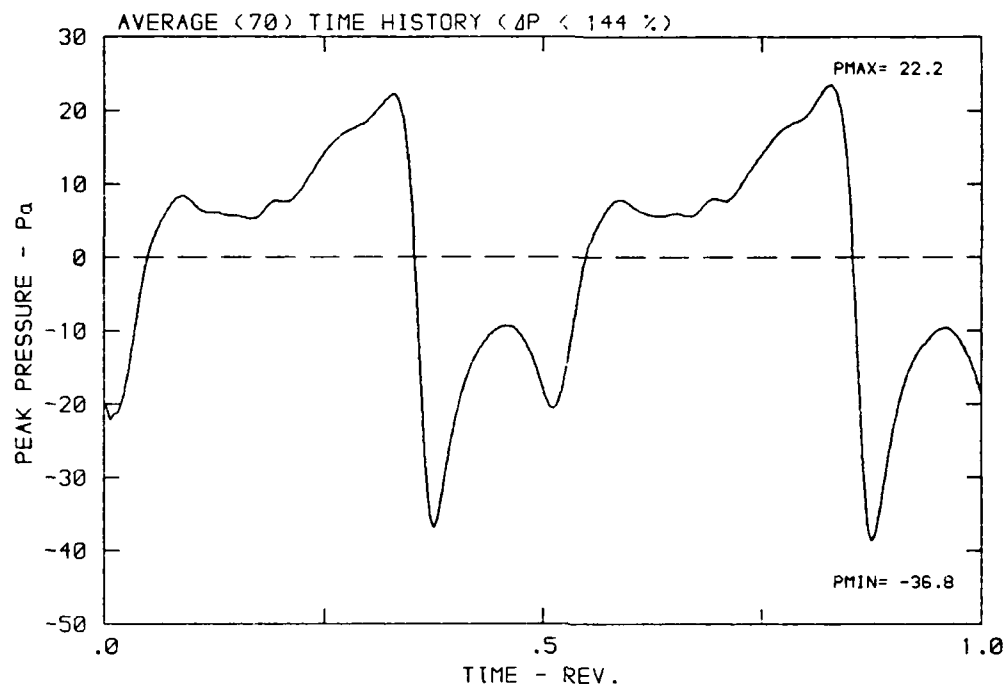
DATA POINT: EN-2 RUN: 164 MP: 9

β : 19.9° MH: .7677 n: 2400 rpm v/u: .203 ϕ : 7.3° T: 286.6 K



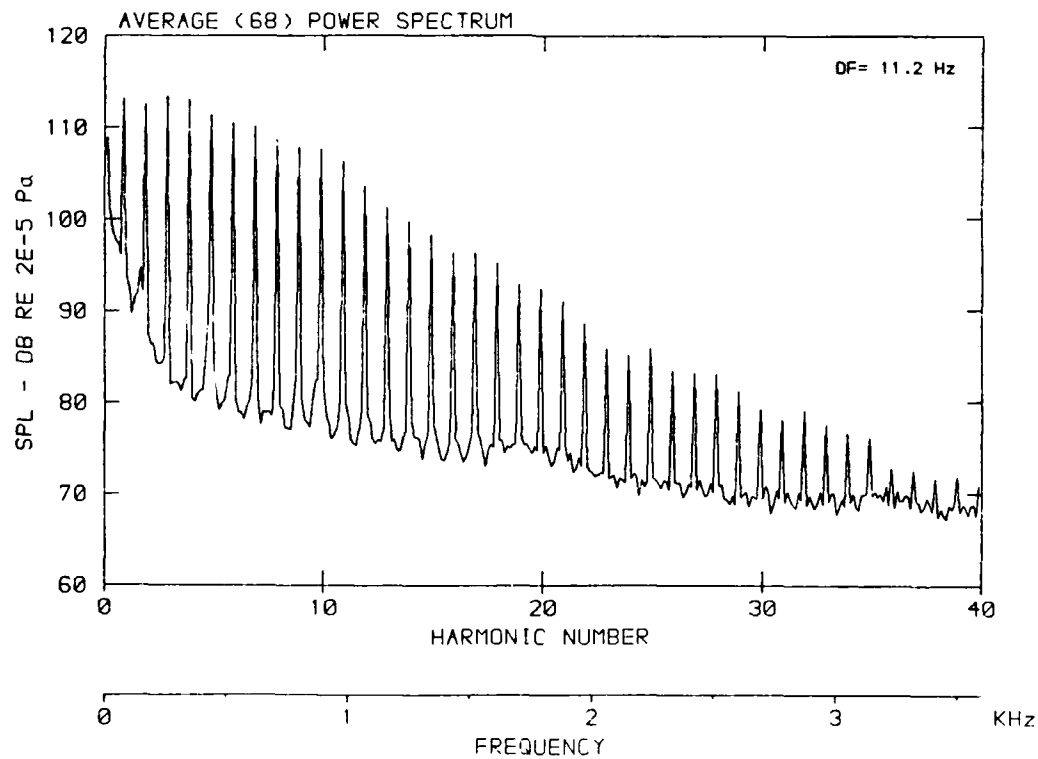
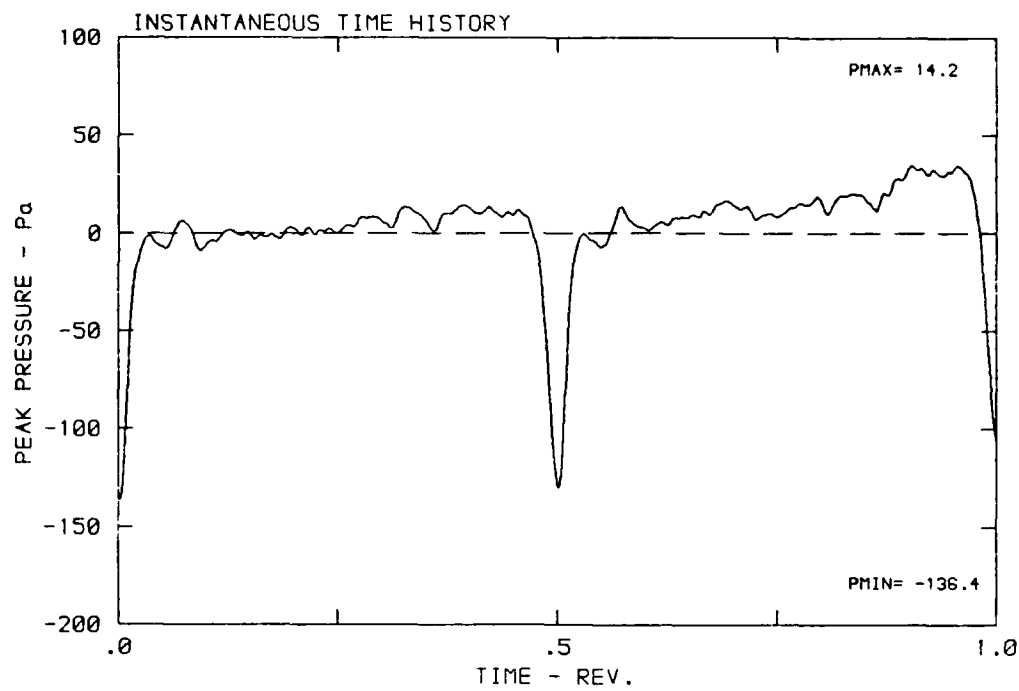
DATA POINT: EN-2 RUN: 164 MP: 9

β : 19.9° MH: .7677 n: 2400 rpm v/u: .203 ϕ : 7.3° T: 286.6 K



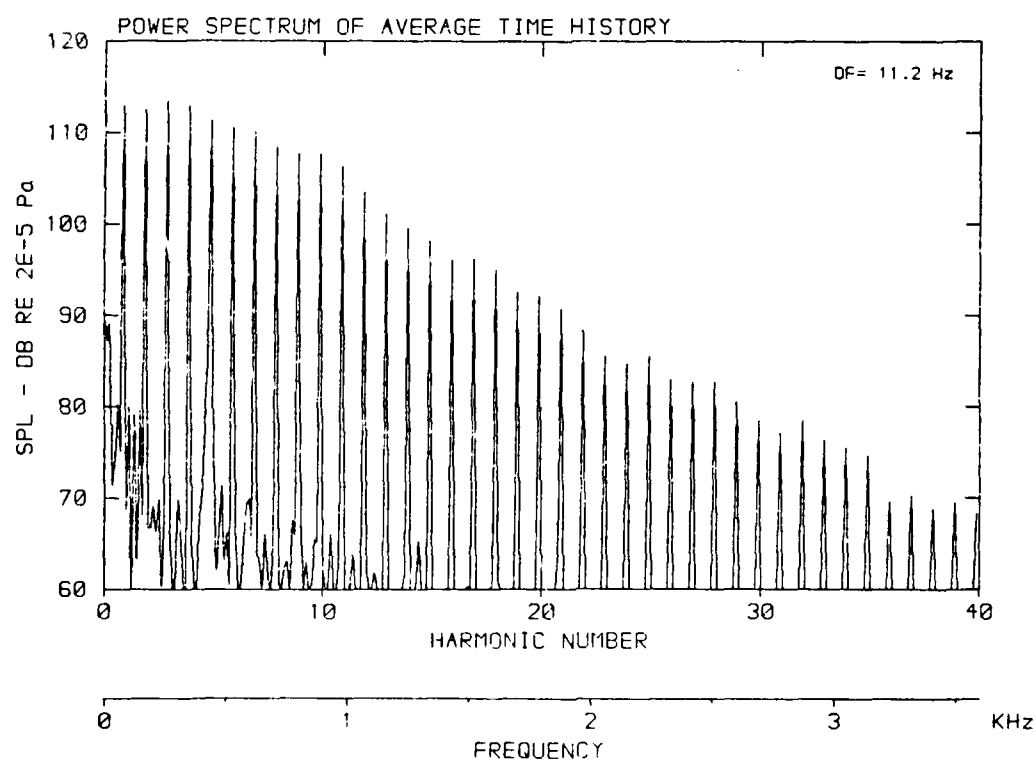
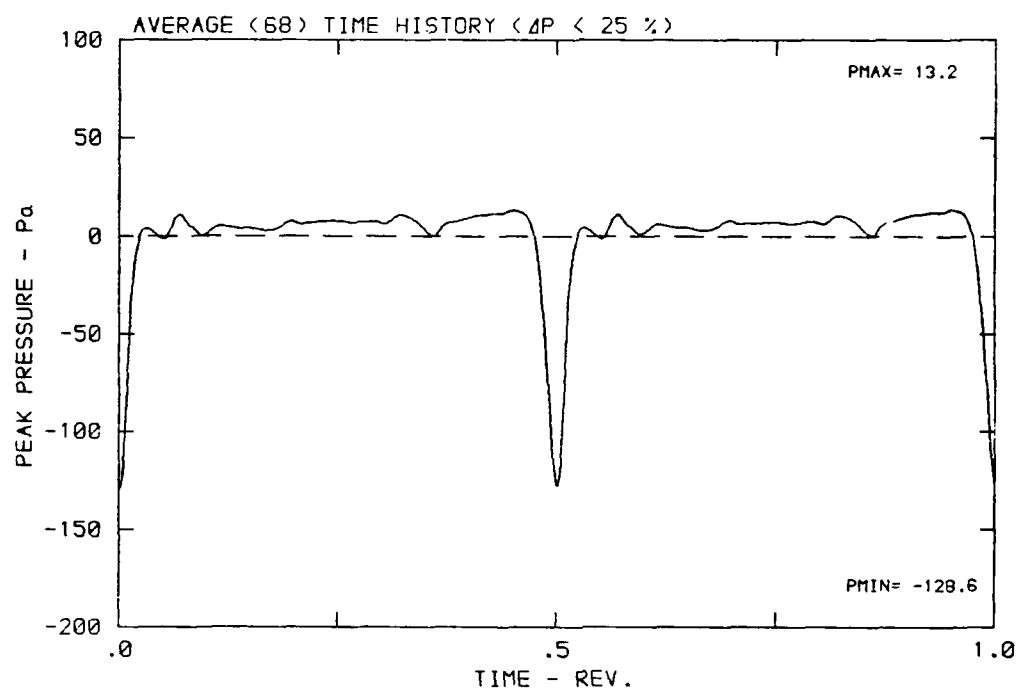
DATA POINT: EN-3 RUN: 165 MP: 1

β : 19.9° MH: .8745 n: 2700 rpm v/u: .269 ϕ : 7.3° T: 287.9 K



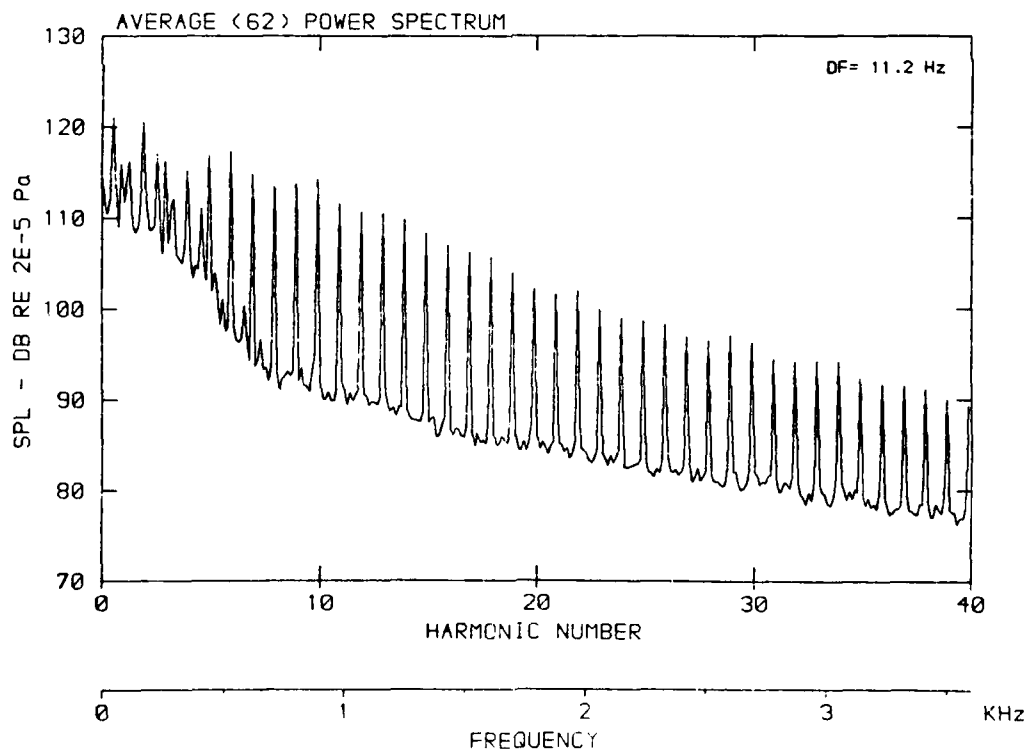
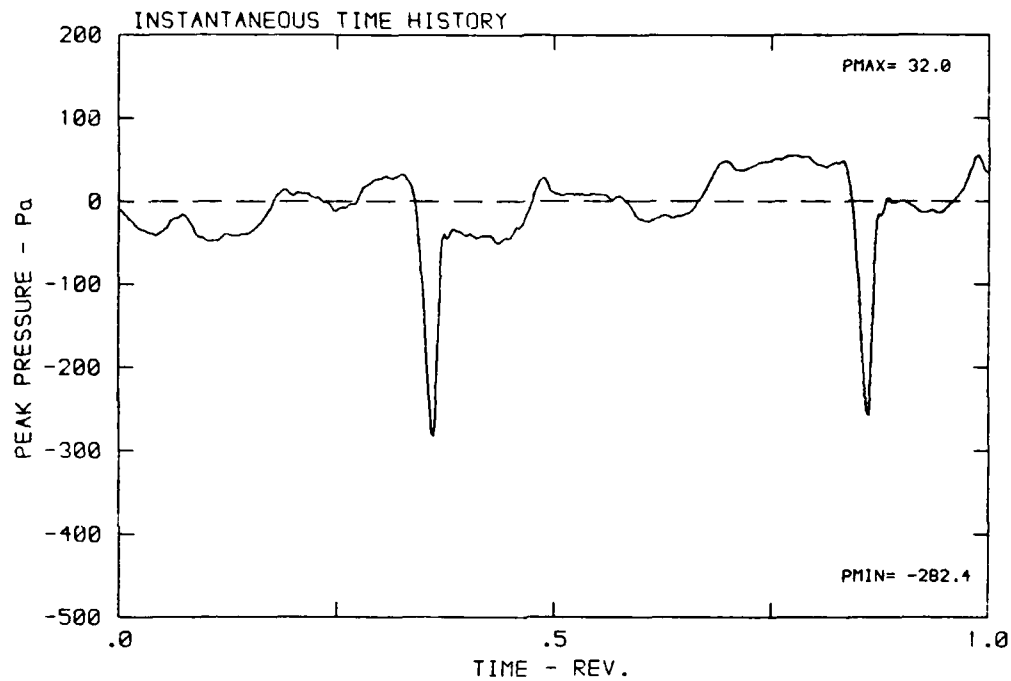
DATA POINT: EN-3 RUN: 165 MP: 1

β : 19.9° MH: .8745 n: 2700 rpm v/u: .269 ϕ : 7.3° T: 287.9 K



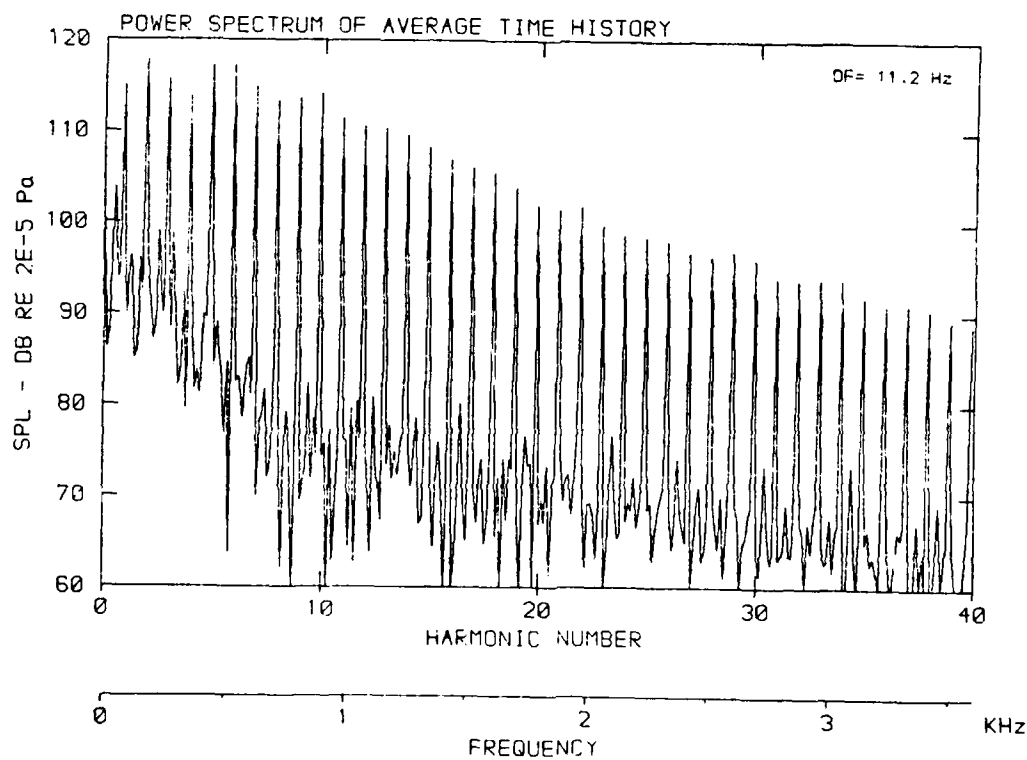
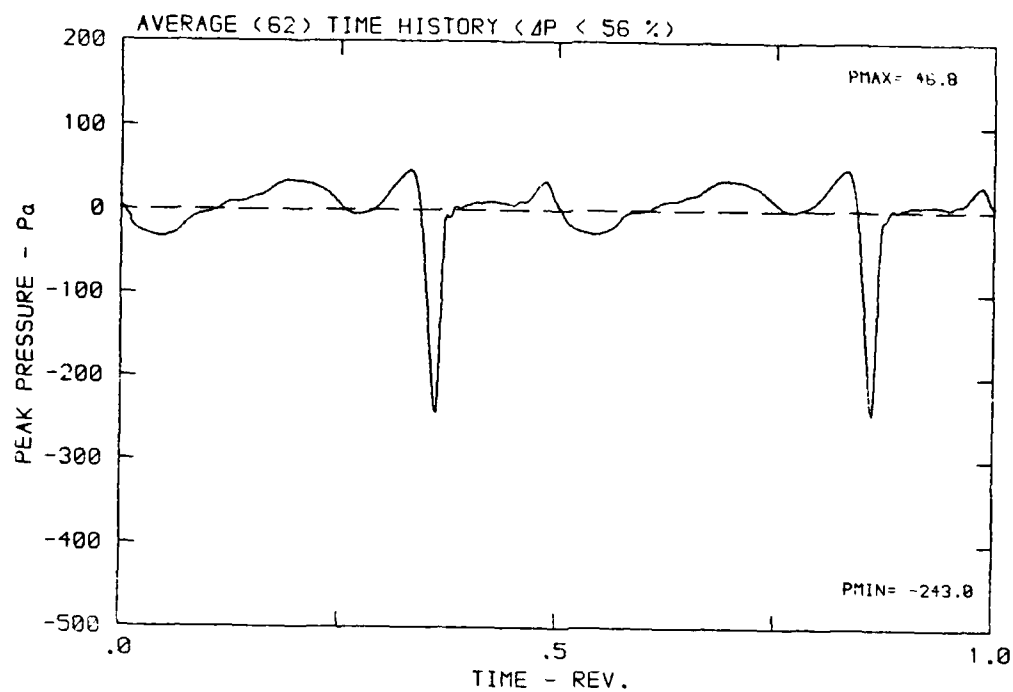
DATA POINT: EN-3 RUN: 165 MP: 2

β : 19.9° MH: .8745 n: 2700 rpm v/u: .269 ϕ : 7.3° T: 287.9 K



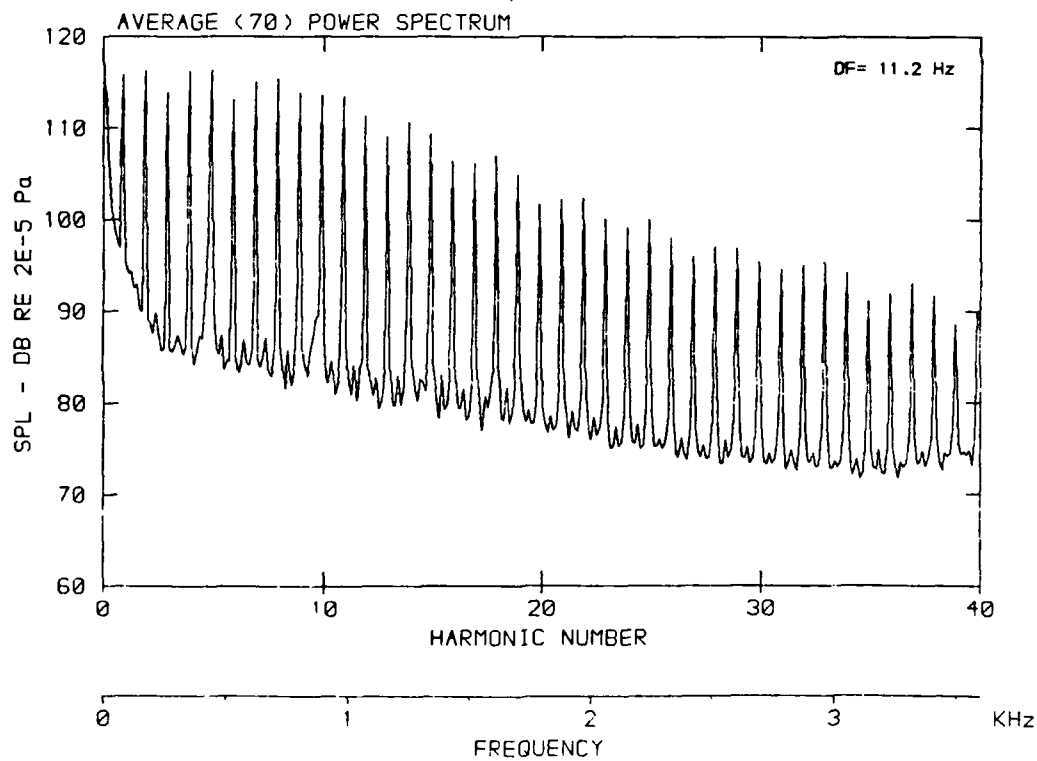
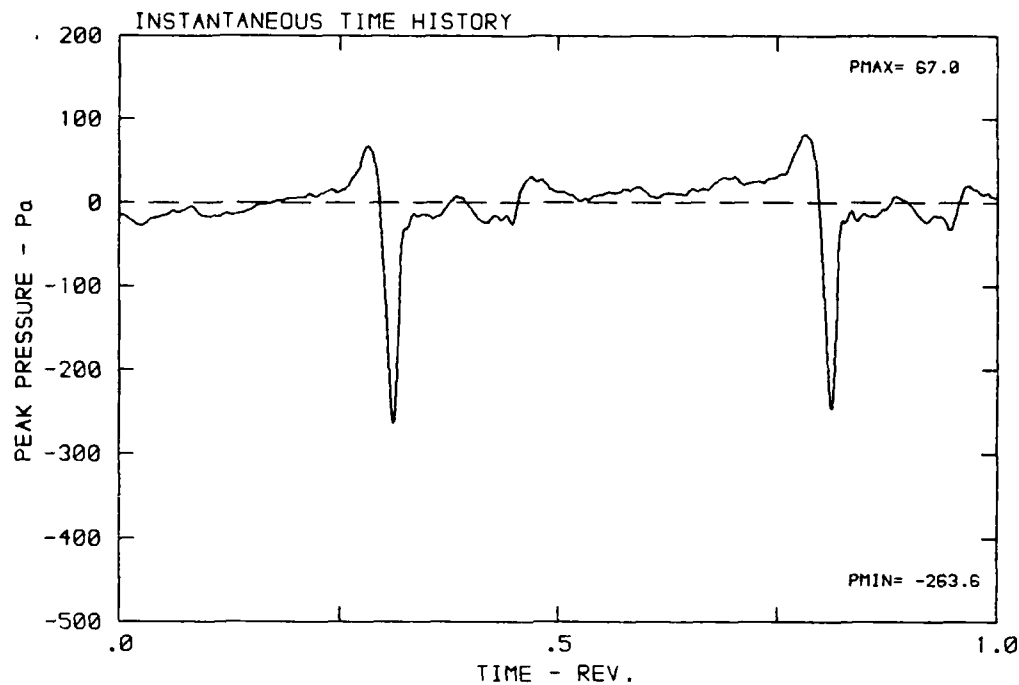
DATA POINT: EN-3 RUN: 165 MP: 2

β : 19.9° MH: .8745 n: 2700 rpm v/u: .269 ϕ : 7.3° T: 287.9 K



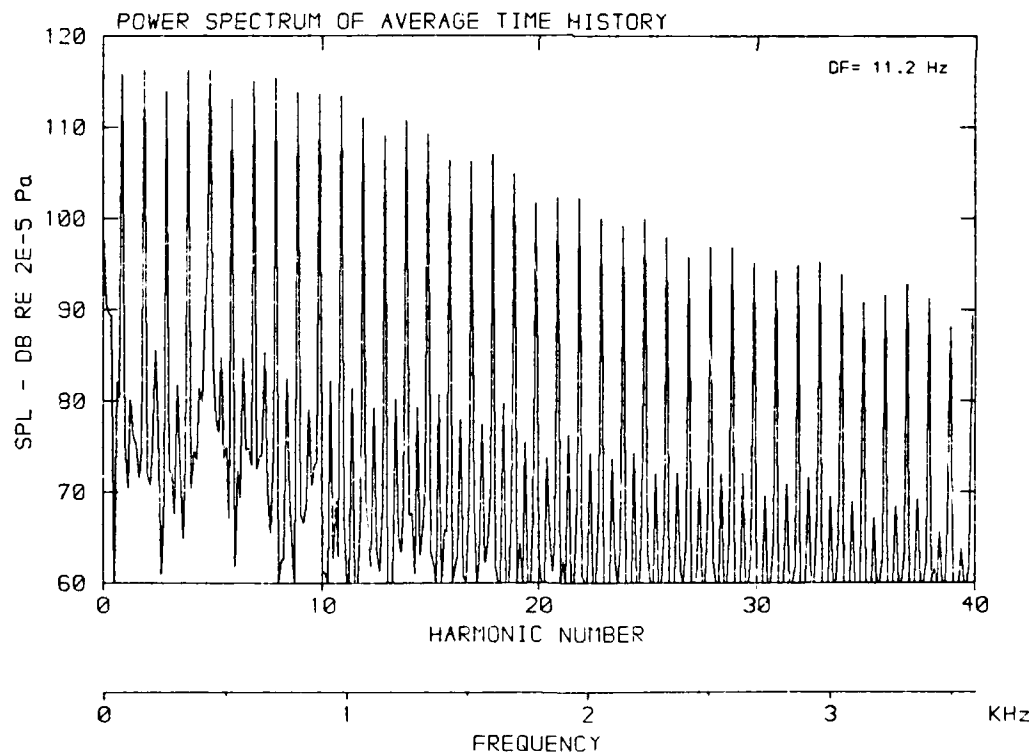
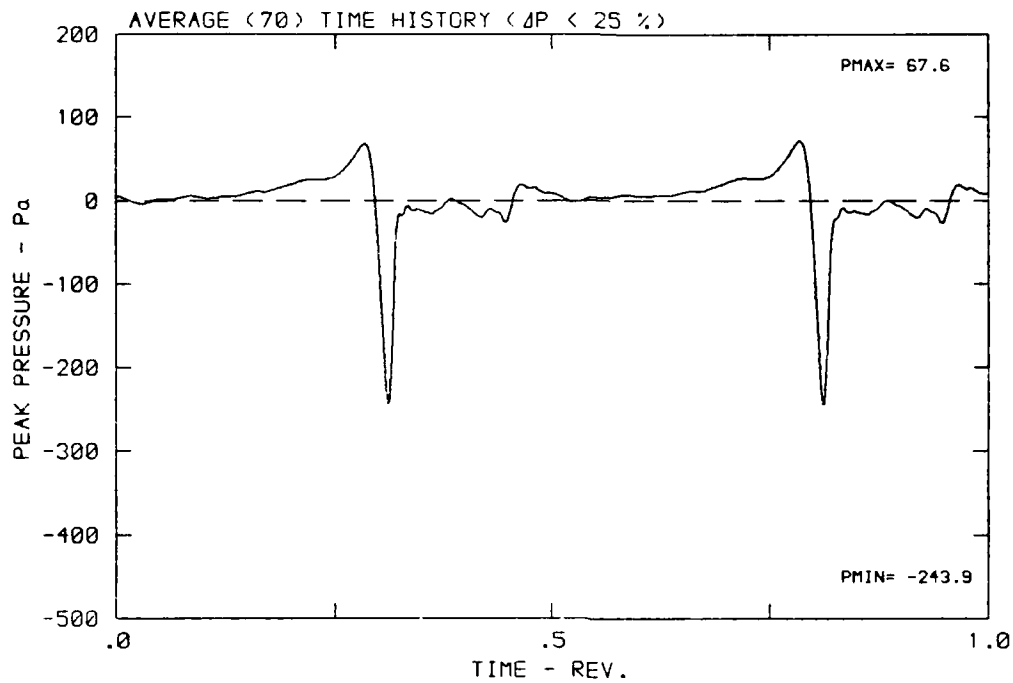
DATA POINT: EN-3 RUN: 165 MP: 3

β : 19.9° MH: .8745 n: 2700 rpm v/u : .269 ϕ : 7.3° T: 287.9 K



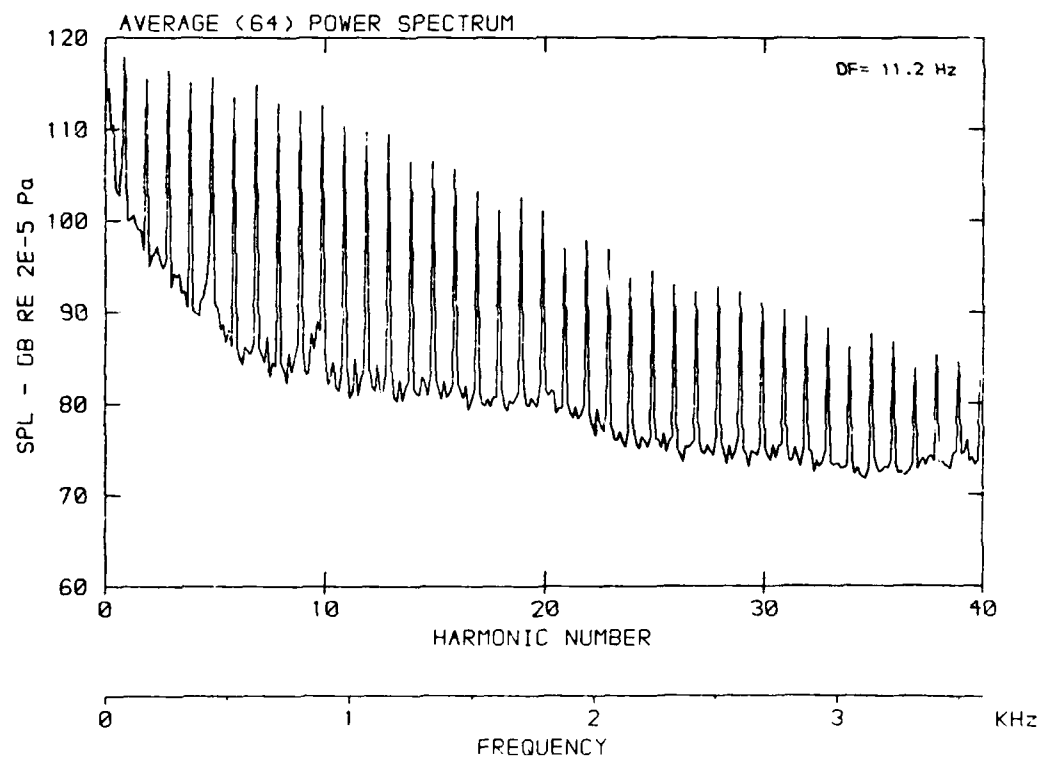
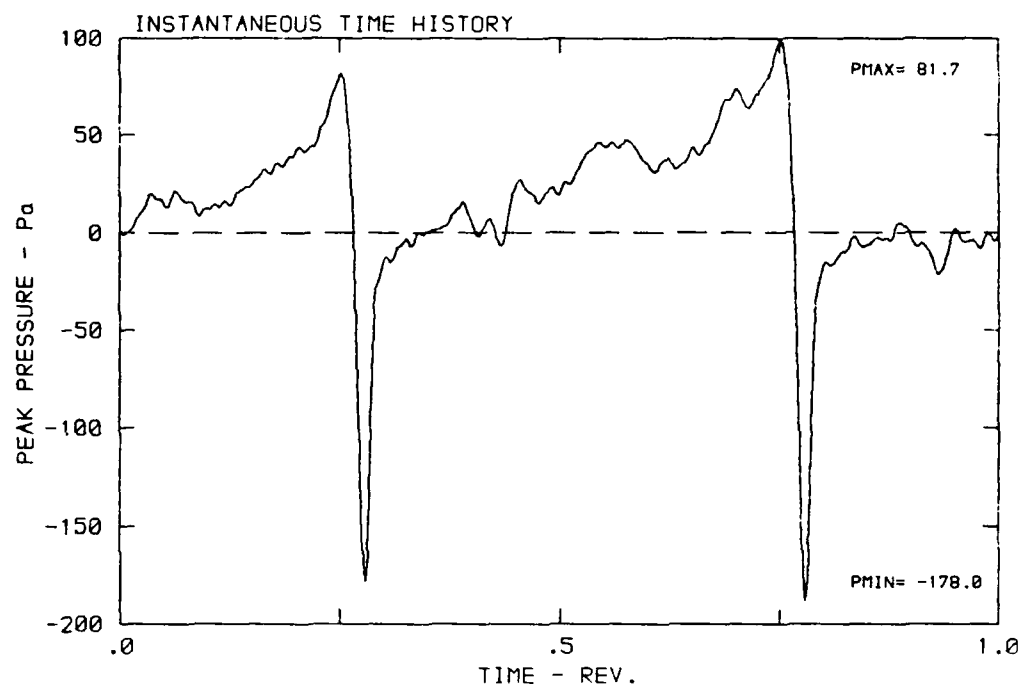
DATA POINT: EN-3 RUN: 165 MP: 3

β : 19.9° MH: .8745 n: 2700 rpm v/u: .269 ϕ : 7.3° T: 287.9 K



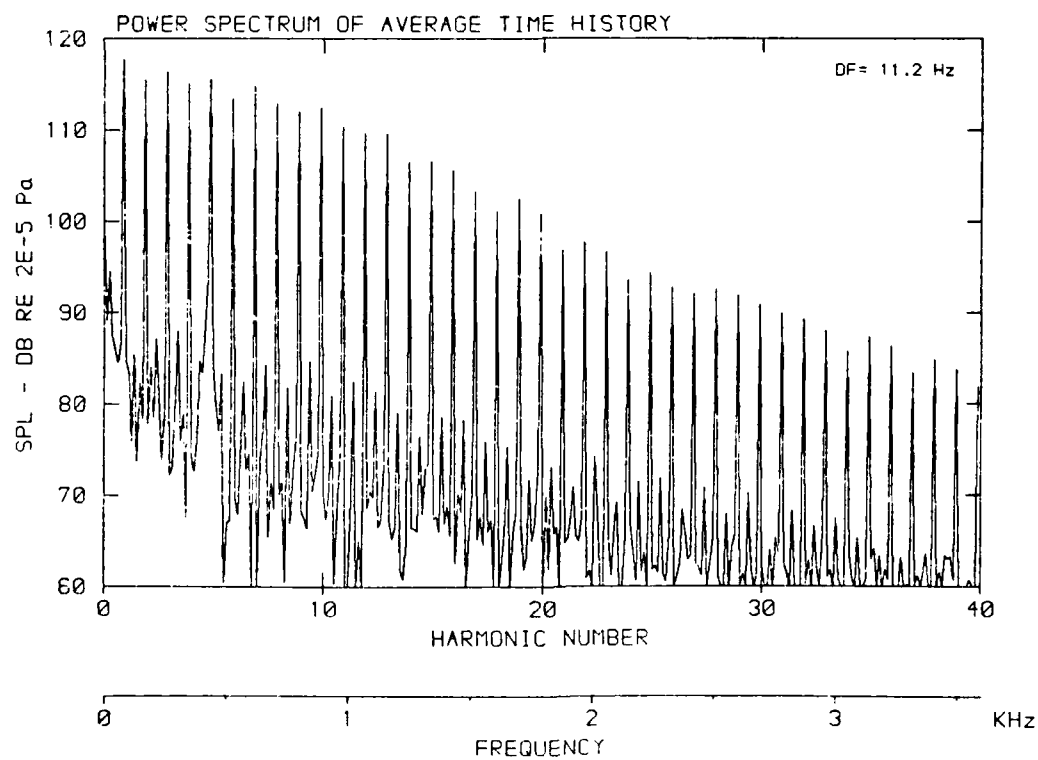
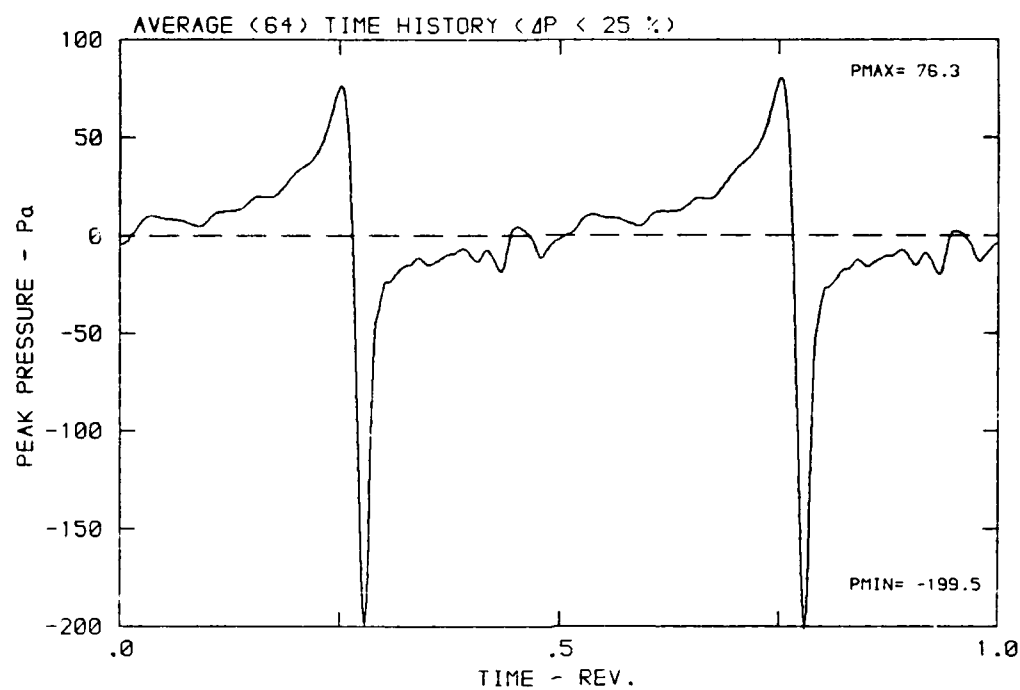
DATA POINT: EN-3 RUN: 165 MP: 4

β : 19.9° MH: .8745 n: 2700 rpm v/u: .269 ϕ : 7.3° T: 287.9 K



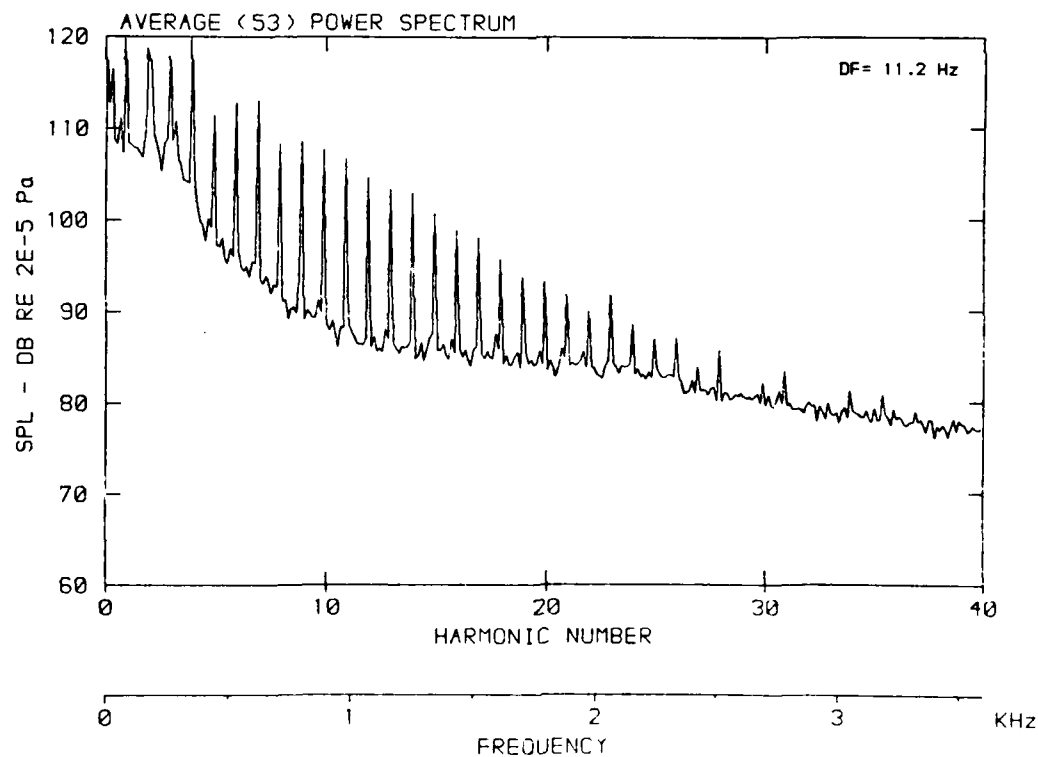
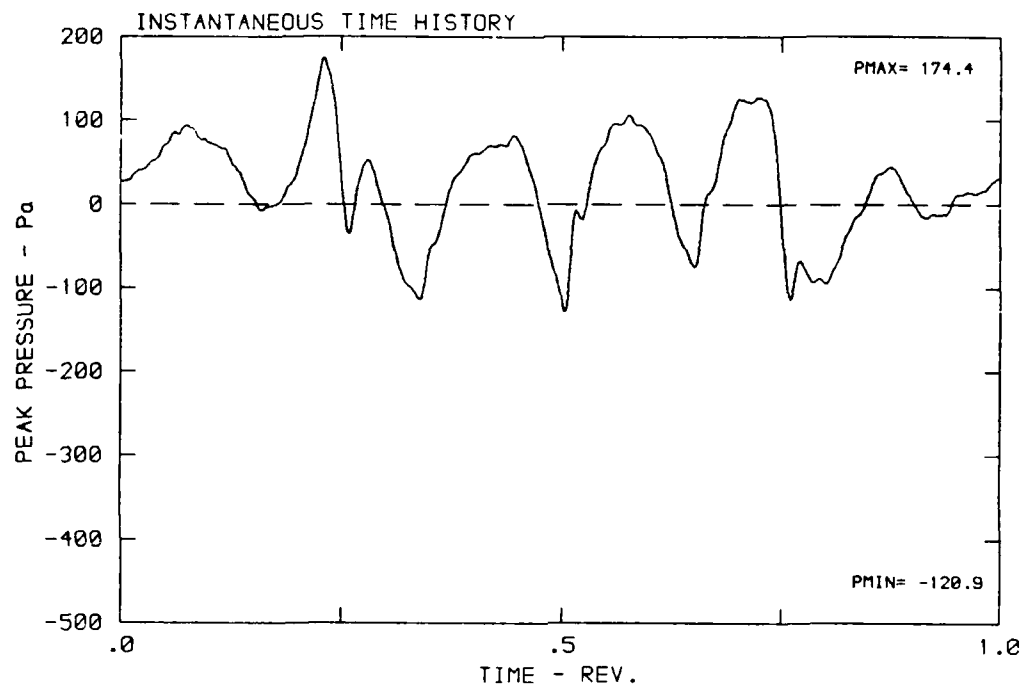
DATA POINT: EN-3 RUN: 165 MP: 4

β : 19.9° MH: .8745 n: 2700 rpm v/u : .269 ϕ : 7.3° T: 287.9 K



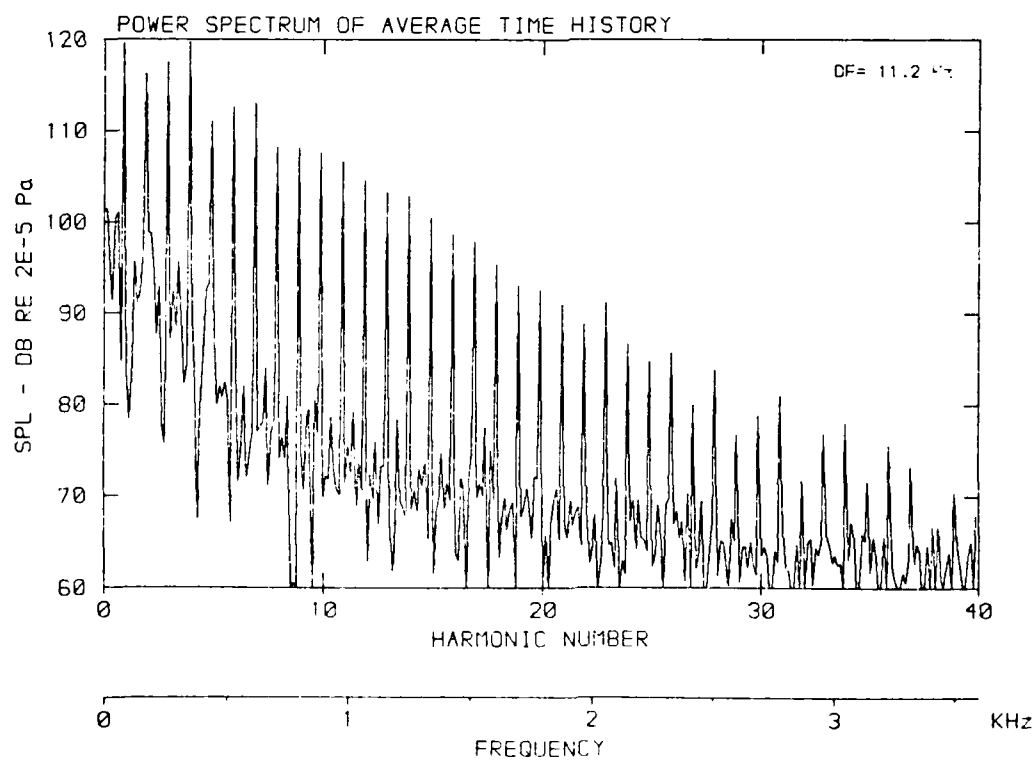
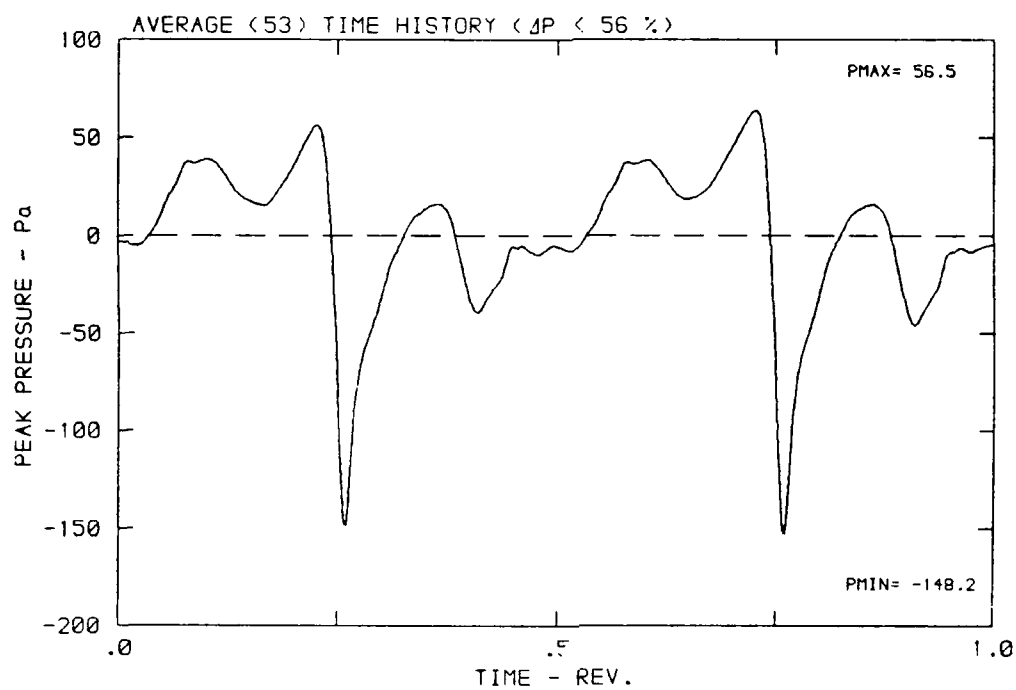
DATA POINT: EN-3 RUN: 165 MP: 5

β : 19.9° MH: .8745 n: 2700 rpm v/u: .269 ϕ : 7.3° T: 287.9 K



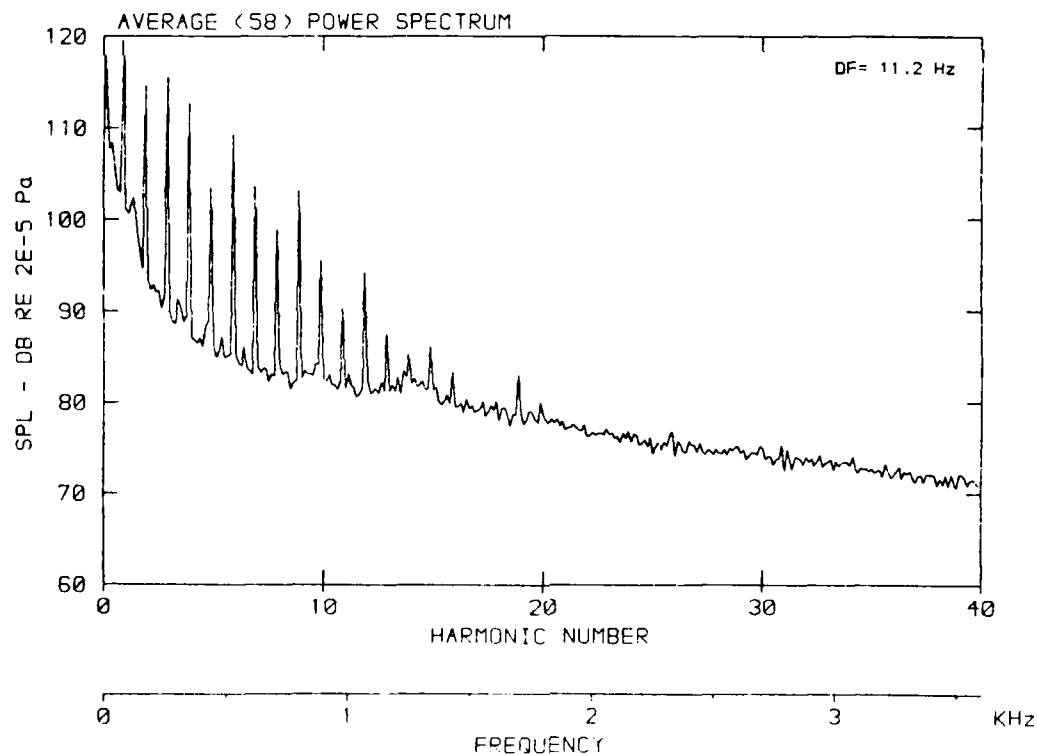
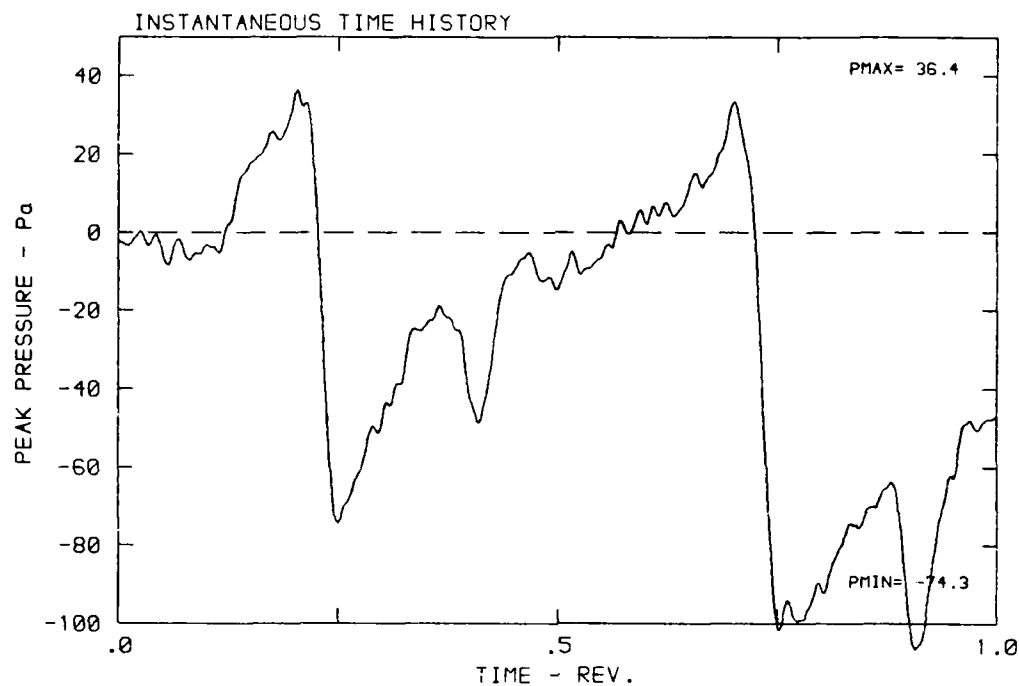
DATA POINT: EN-3 RUN: 165 MP: 5

β : 19.9° MH: .8745 n: 2700 rpm v/u : .269 ϕ : 7.3° T: 287.9 K



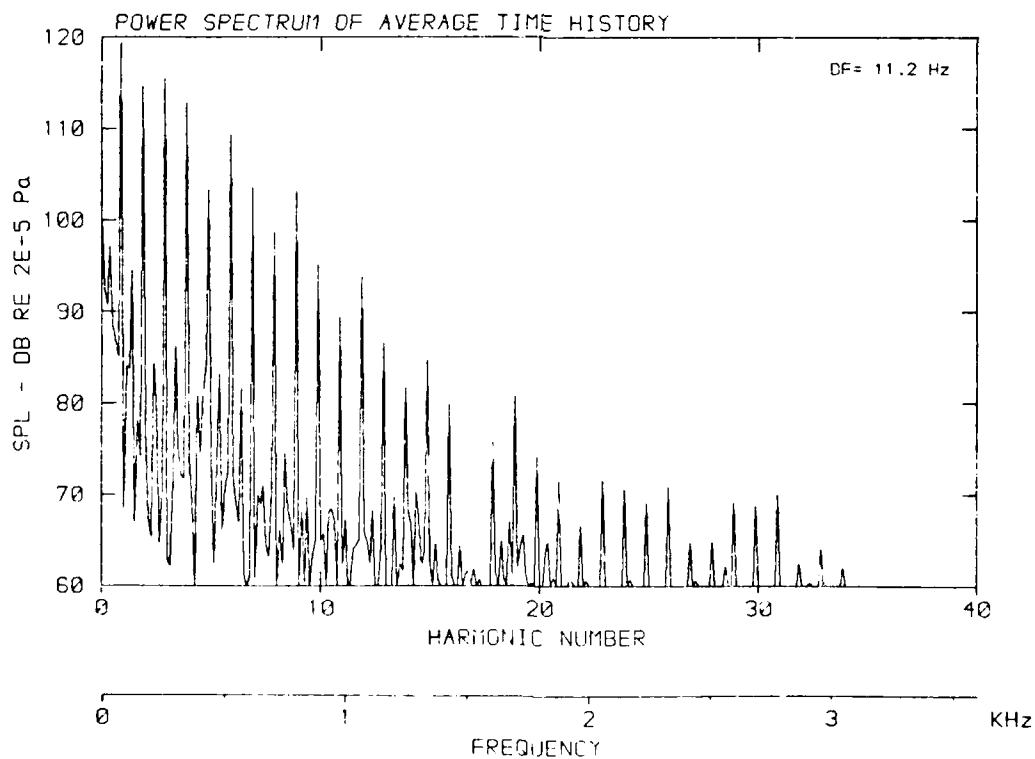
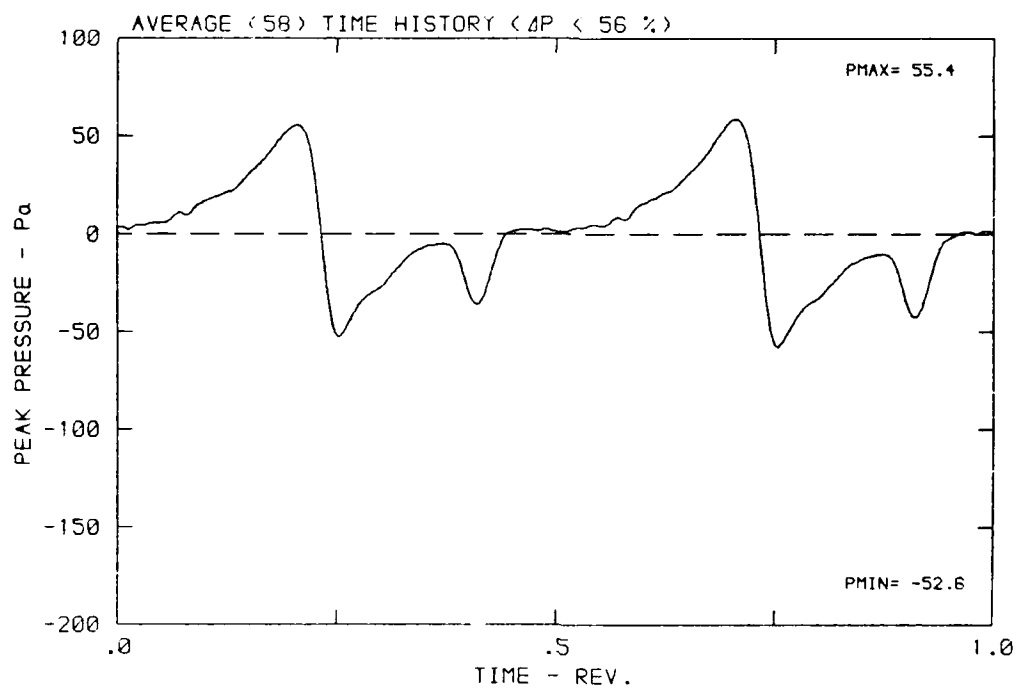
DATA POINT: EN-3 RUN: 165 MP: 6

β : 19.9° MH: .8745 n: 2700 rpm v/u: .269 ϕ : 7.3° T: 287.3 K



DATA POINT: EN-3 RUN: 165 MP: 6

β : 19.9° MH: .8745 n: 2700 rpm v/u: .269 ϕ : 7.3° T: 287.9 K



AD-A174 988

DFVLR/FAR (DEUTSCHE FORSCHUNGS-UND VERSUCHSANSTALT FUER
LUFT UND RAUMFAHR. (U) DEUTSCHE FORSCHUNGS- UND
VERSUCHSANSTALT FUER LUFT- UND RAUMF..

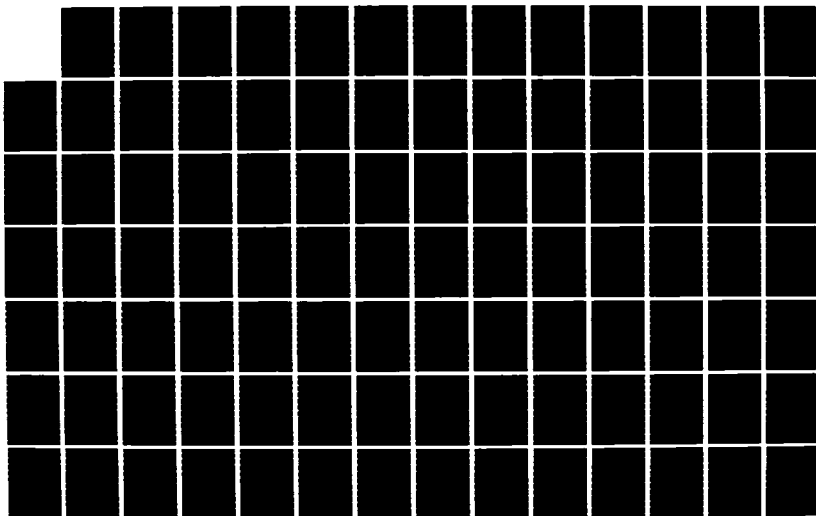
5/6

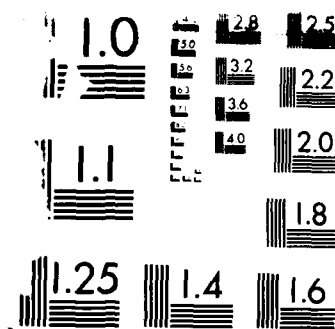
UNCLASSIFIED

M H DOBRZYNSKI ET AL. 1986

F/G 28/1

NL

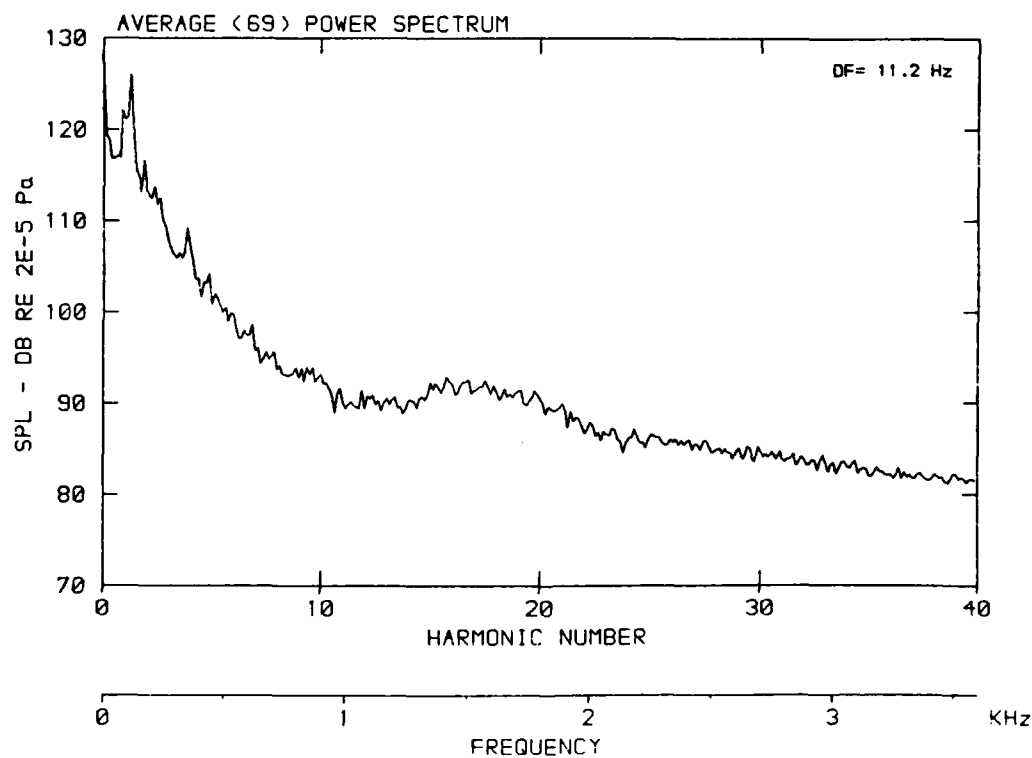
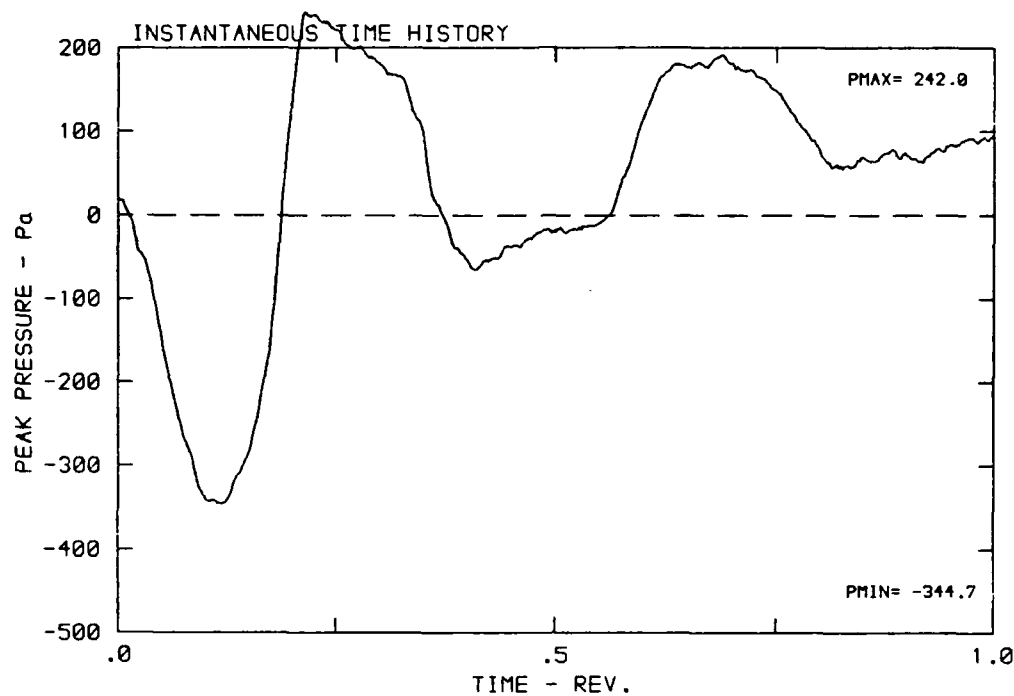




RESOLUTION TEST CHART
 1010-10-10

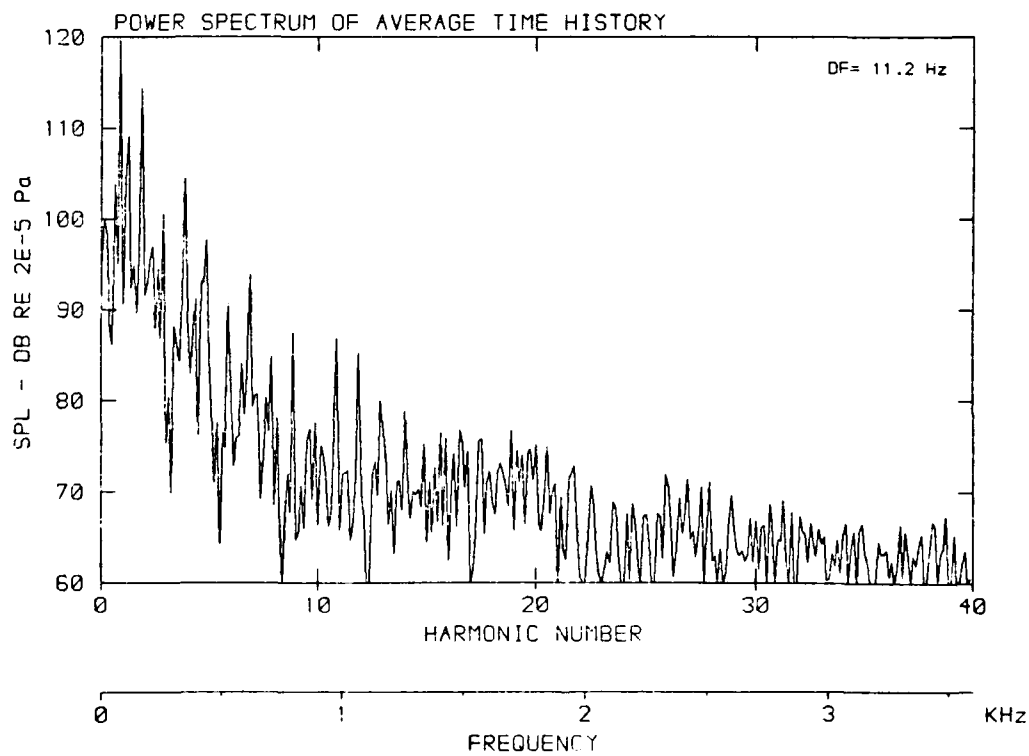
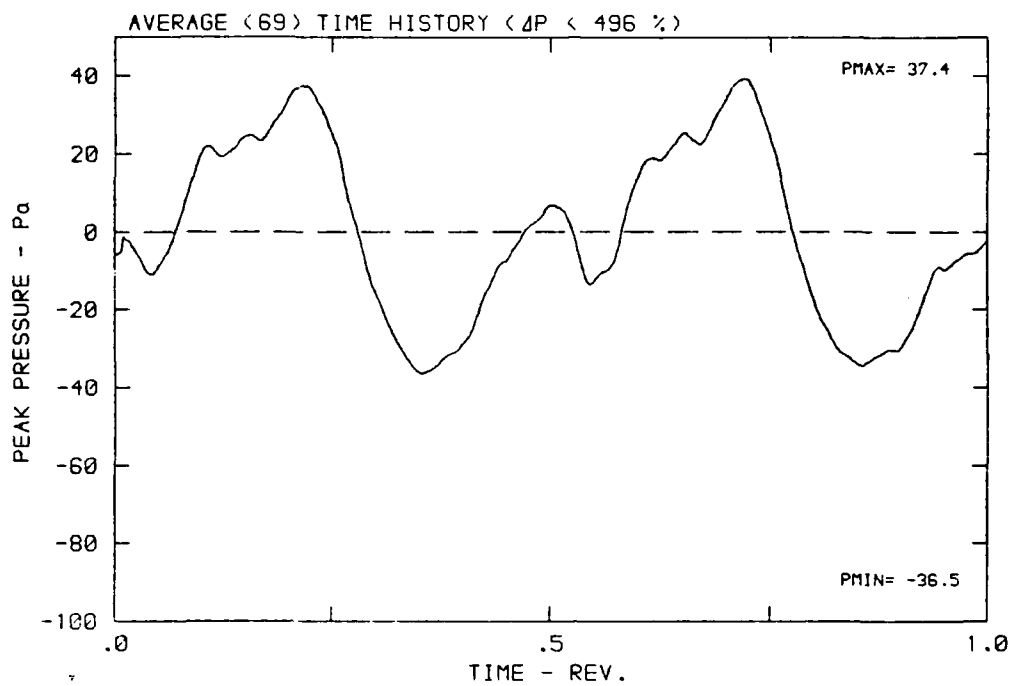
DATA POINT: EN-3 RUN: 165 MP: 7

β : 19.9° MH: .8745 n: 2700 rpm v/u: .269 ϕ : 7.3° T: 287.9 K



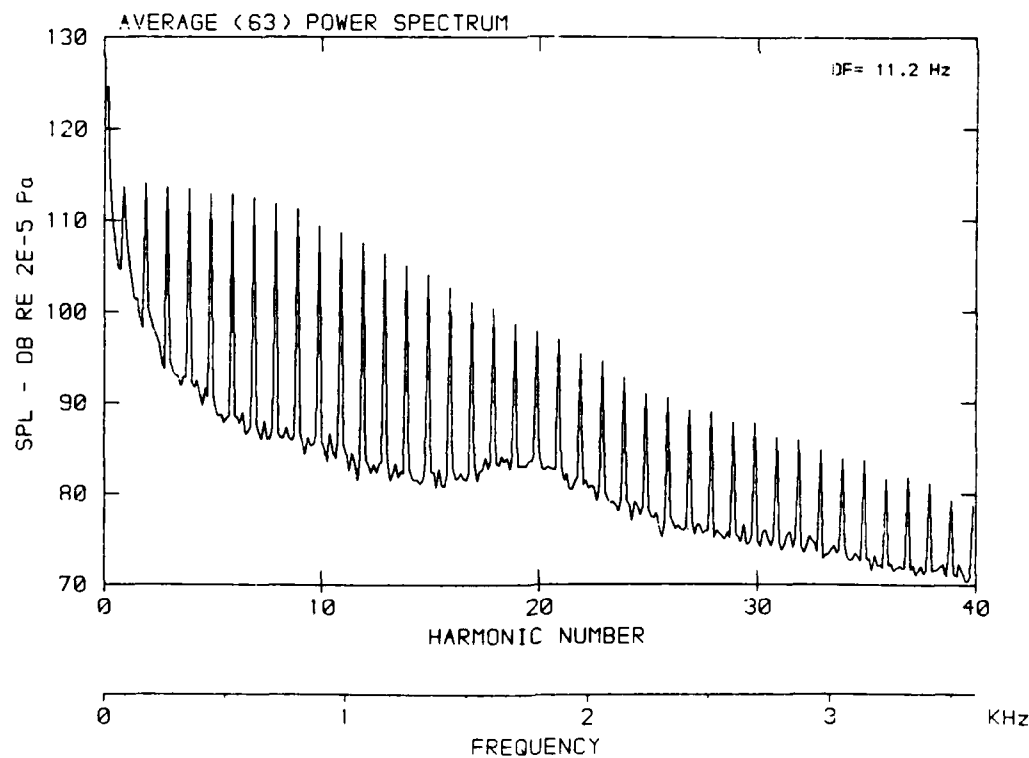
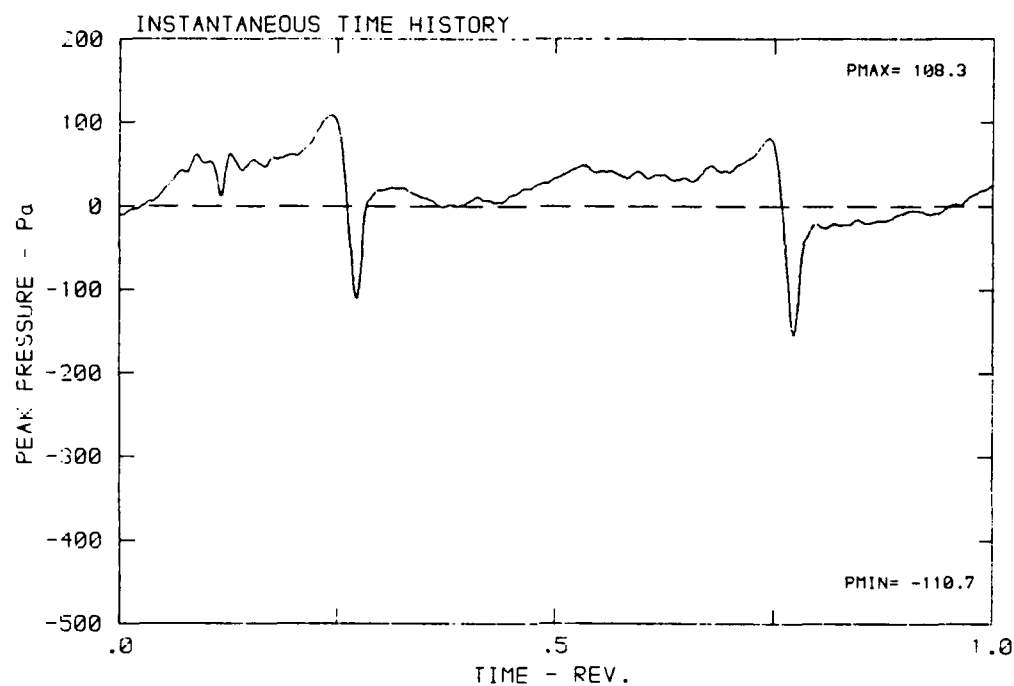
DATA POINT: EN-3 RUN: 165 MP: 7

β : 19.9° MH: .8745 n: 2700 rpm v/u: .269 ϕ : 7.3° T: 287.9 K



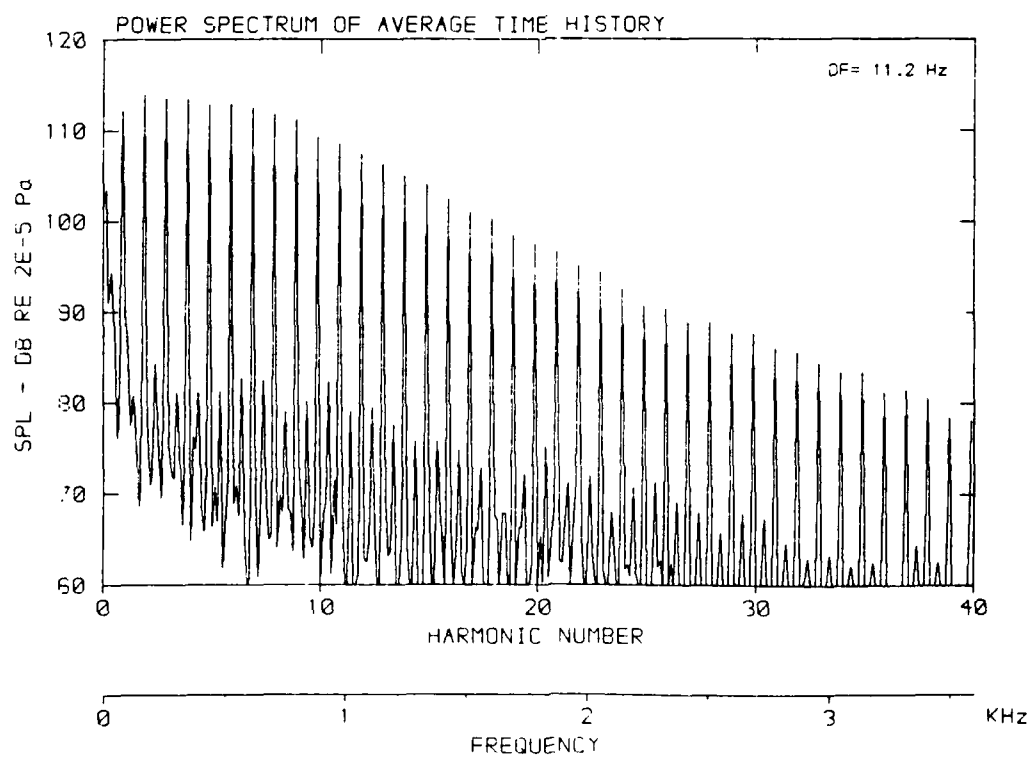
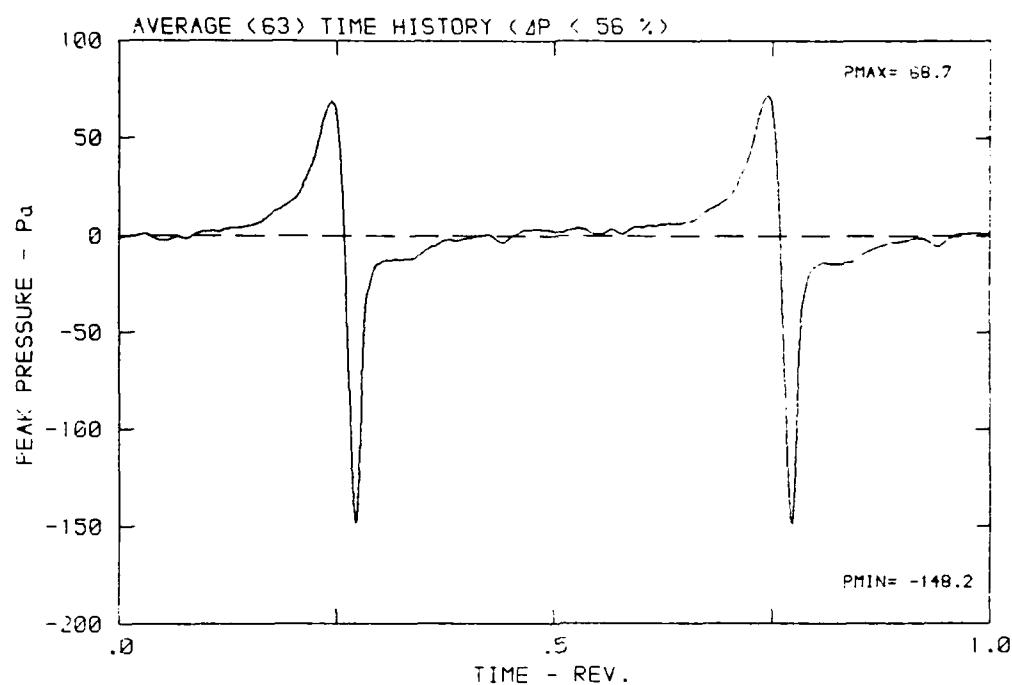
DATA POINT: EN-3 RUN: 165 MP: 8

β : 19.9° MH: .8745 n: 2700 rpm v/u: .269 ϕ : 7.3° T: 287.9 K



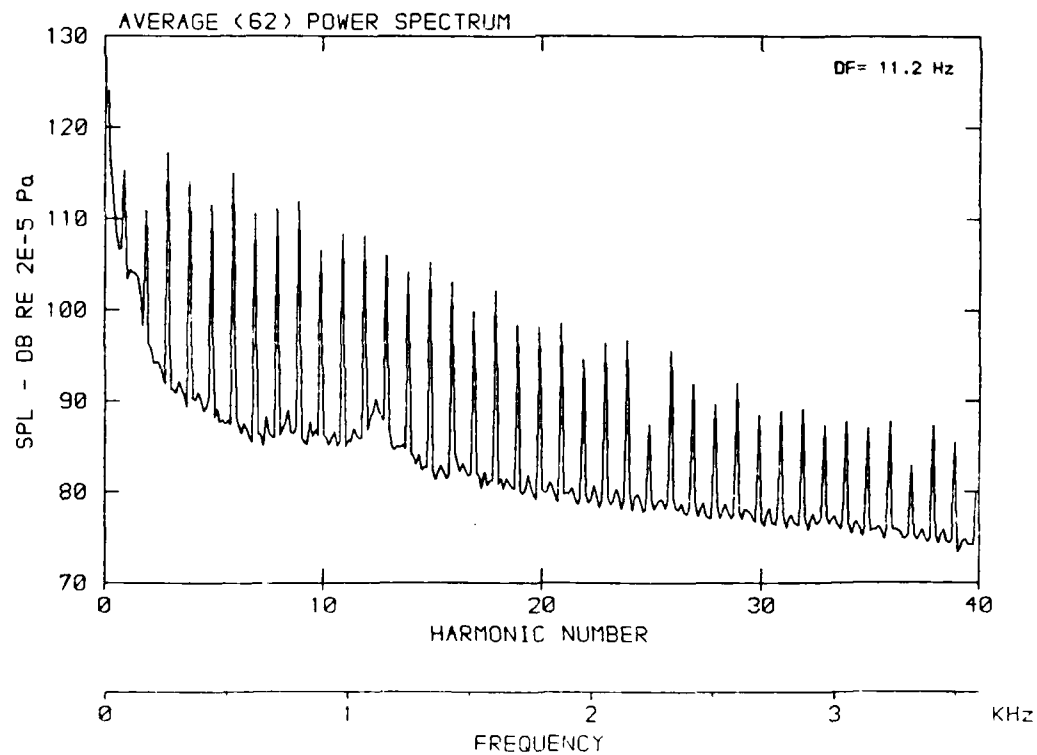
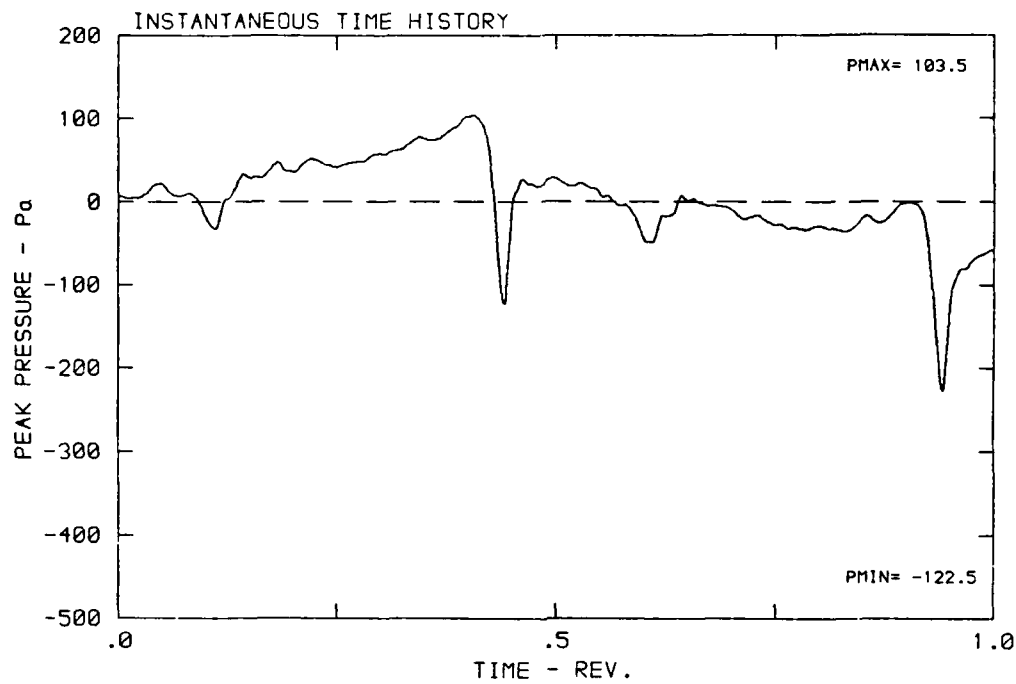
DATA POINT: EN-3 RUN: 165 MP: 8

β : 19.9° MH: .8745 n: 2700 rpm v/u : .269 ϕ : 7.3° T: 287.9 K



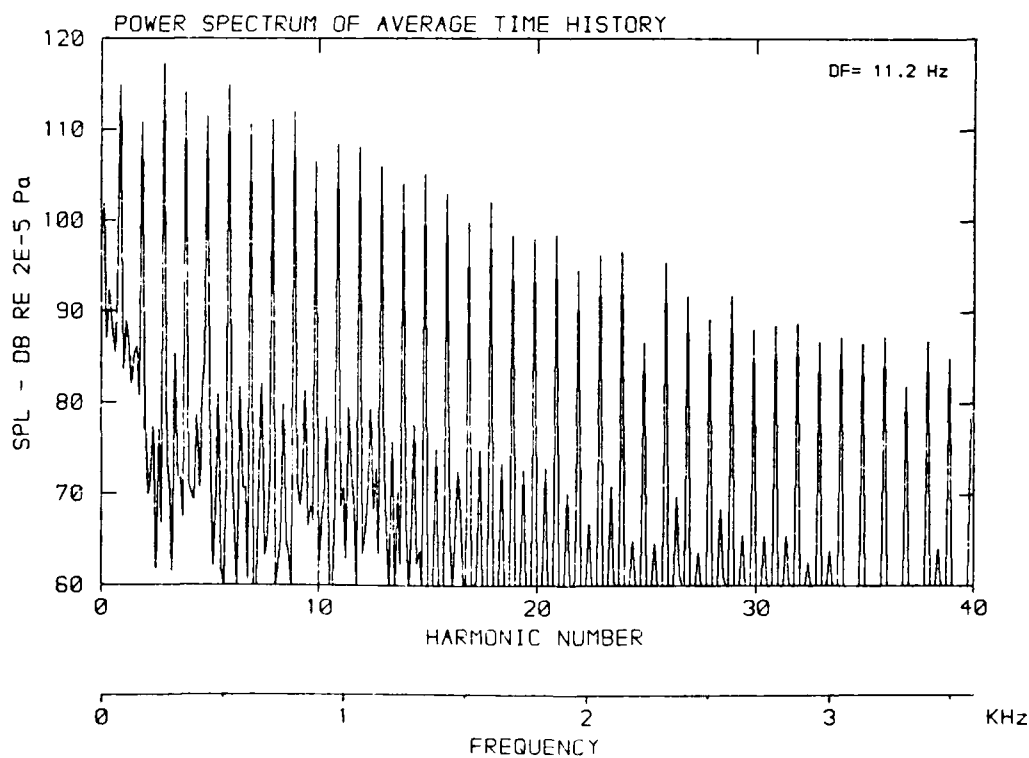
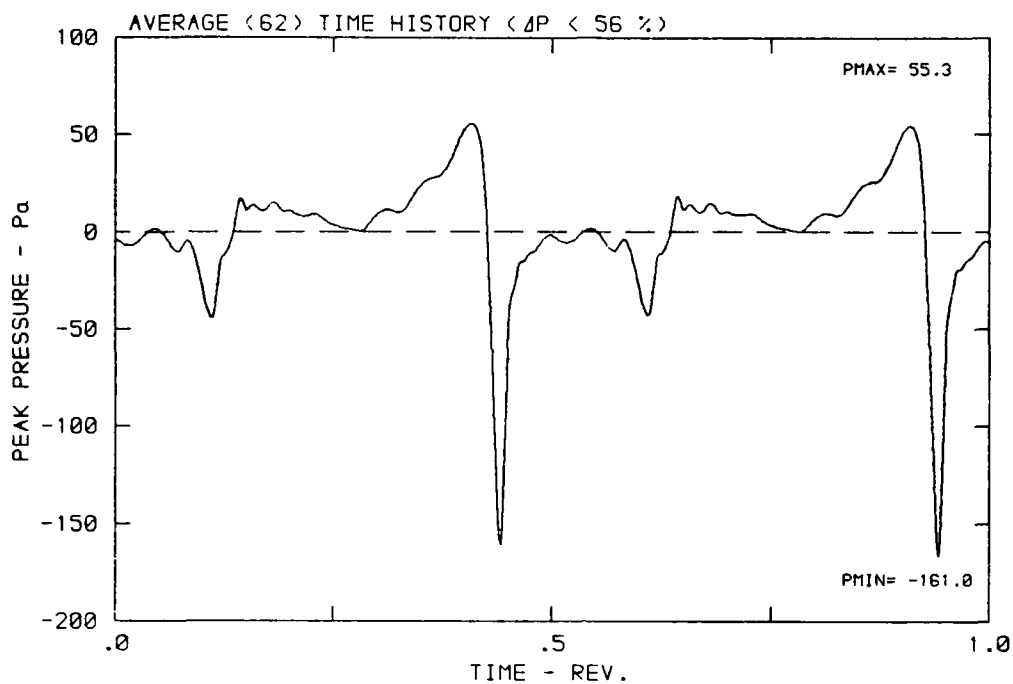
DATA POINT: EN-3 RUN: 165 MP: 9

β : 19.9° MH: .8745 n: 2700 rpm v/u : .269 ϕ : 7.3° T: 287.9 K



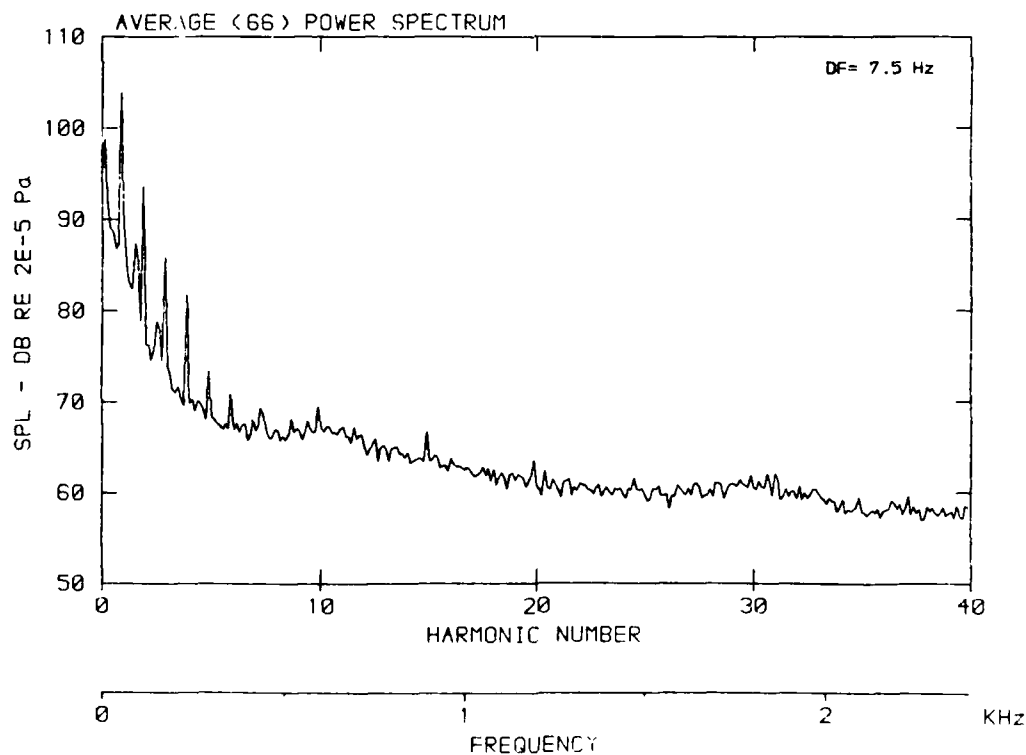
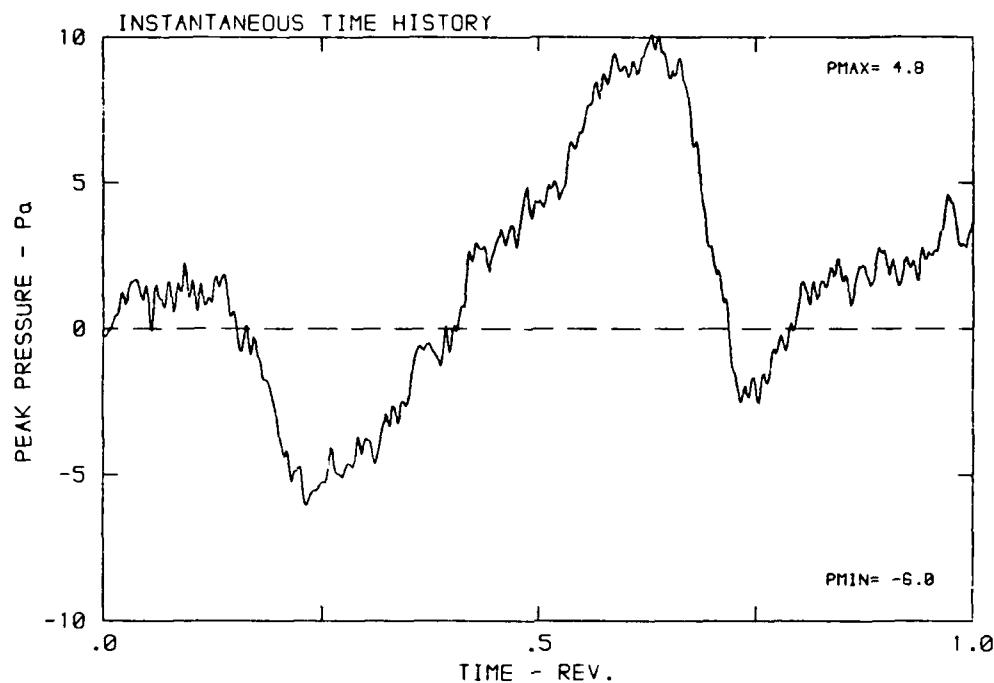
DATA POINT: EN-3 RUN: 165 MP: 9

β : 19.9° MH: .8745 n: 2700 rpm v/u : .269 ϕ : 7.3° T: 287.9 K



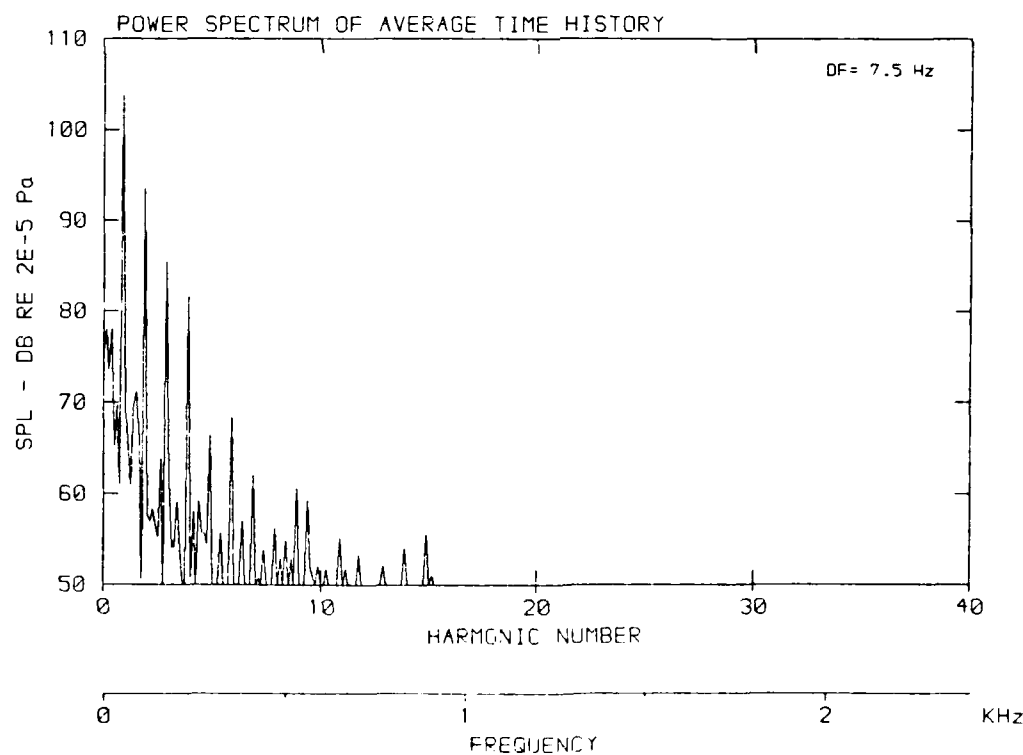
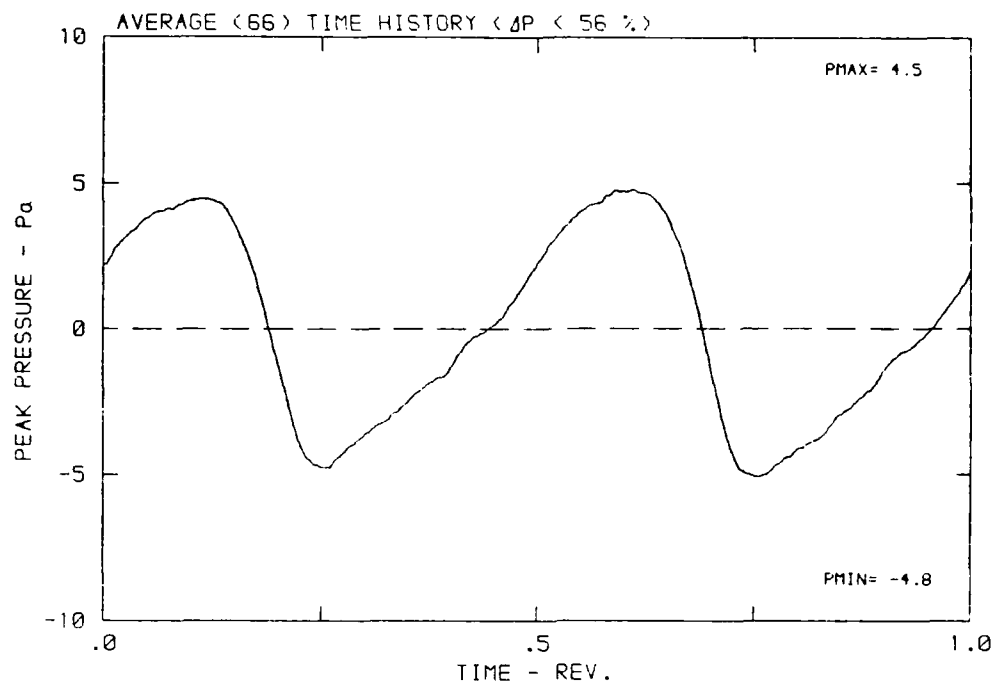
DATA POINT: EN-4 RUN: 160 MP: 1

β : 23.7° MH: .5847 n: 1800 rpm v/u: .268 ϕ : 7.3° T: 286.1 K



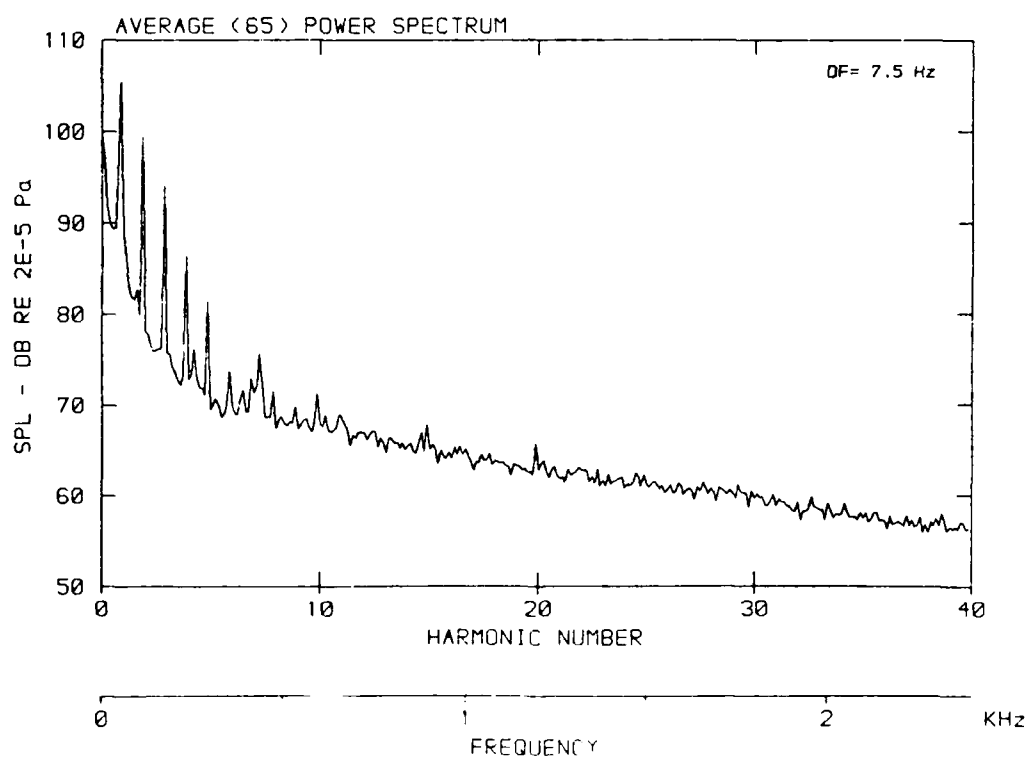
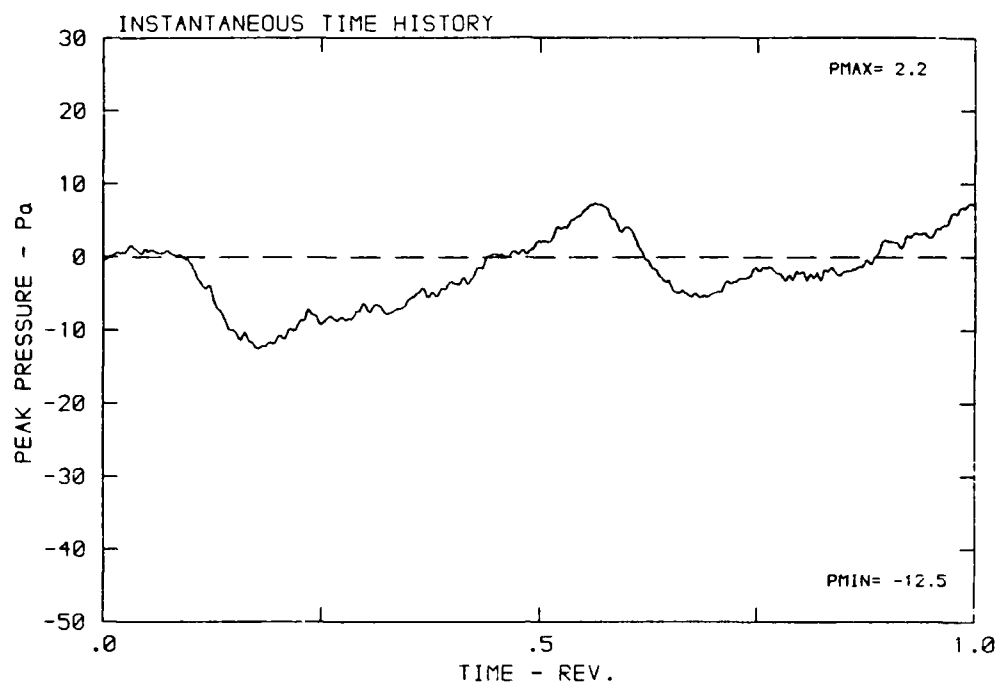
DATA POINT: EN-4 RUN: 160 MP: 1

β : 23.7° MH: .5847 n: 1800 rpm v/u: .268 ϕ : 7.3° T: 286.1 K



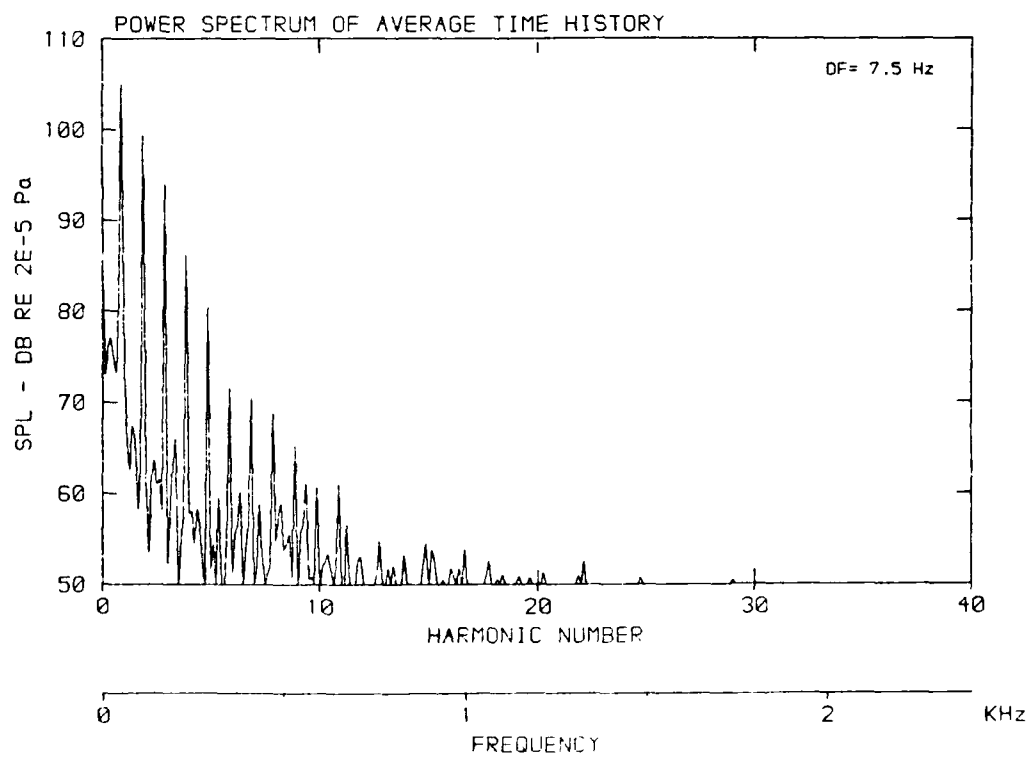
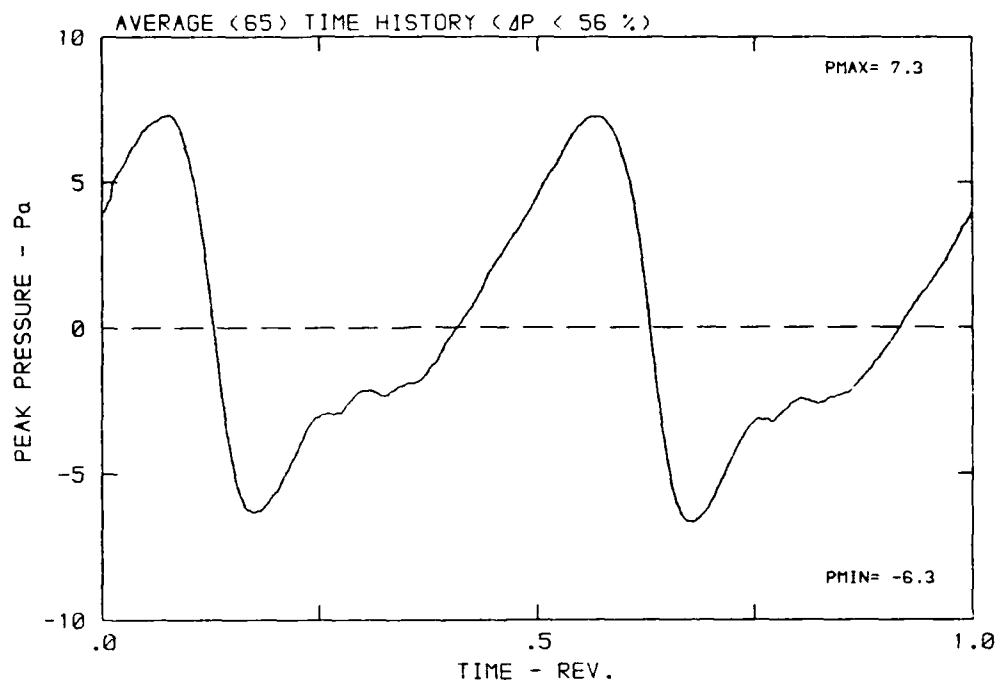
DATA POINT: EN-4 RUN: 160 MP: 2

β : 23.7° MH: .5847 n: 1800 rpm v/u : .268 ϕ : 7.3° T: 286.1 K



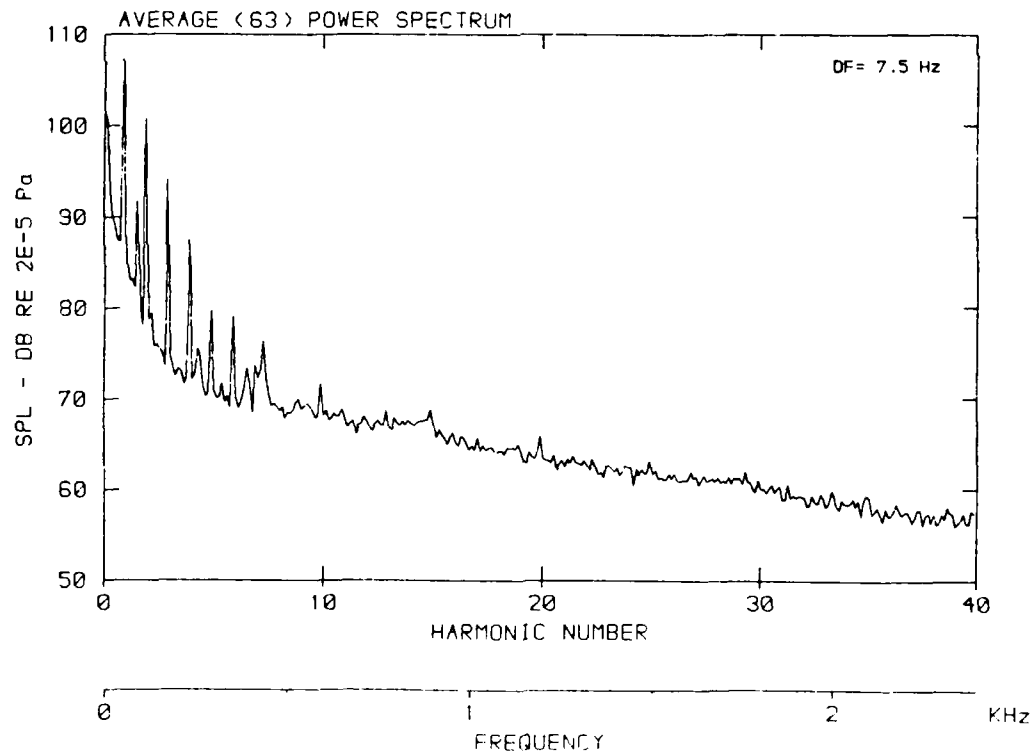
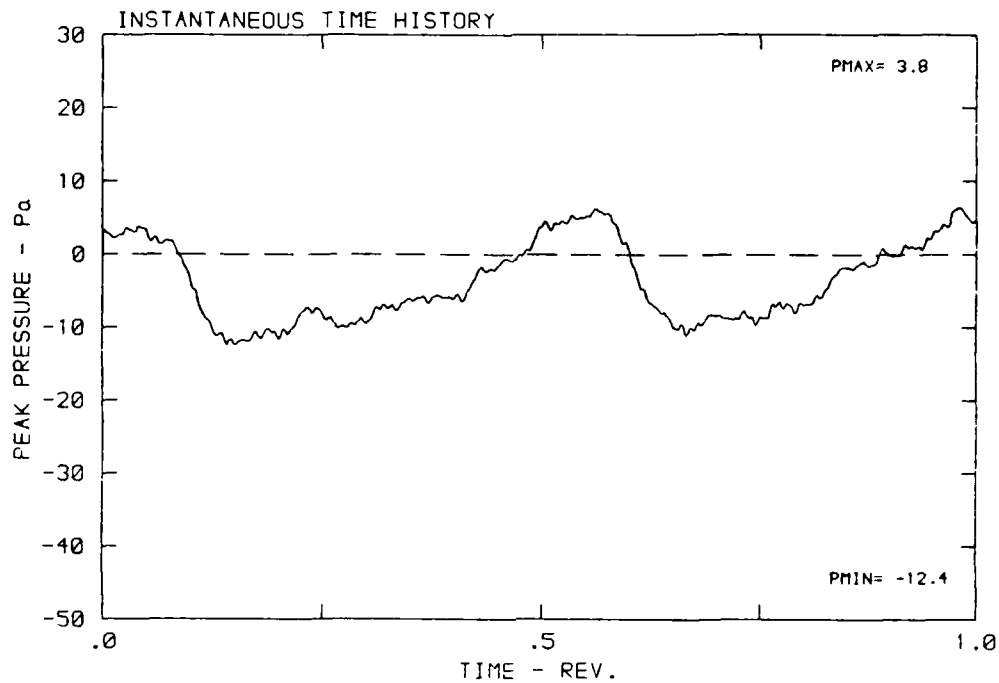
DATA POINT: EN-4 RUN: 160 MP: 2

β : 23.7° MH: .5847 n: 1800 rpm v/u: .268 ϕ : 7.3° T: 286.1 K



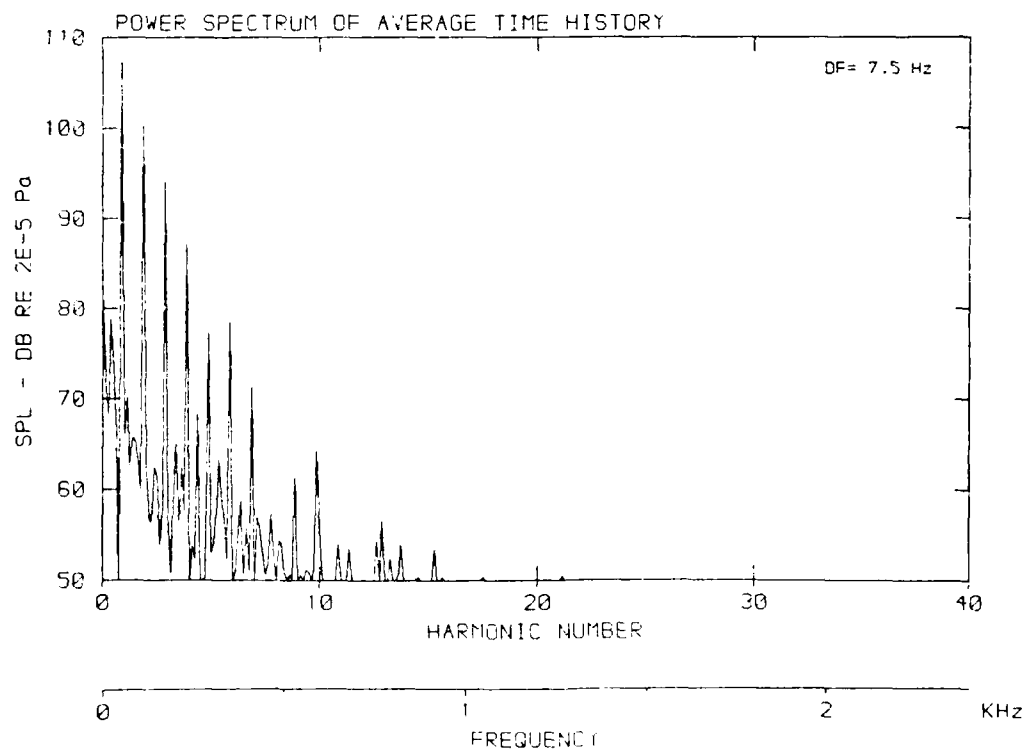
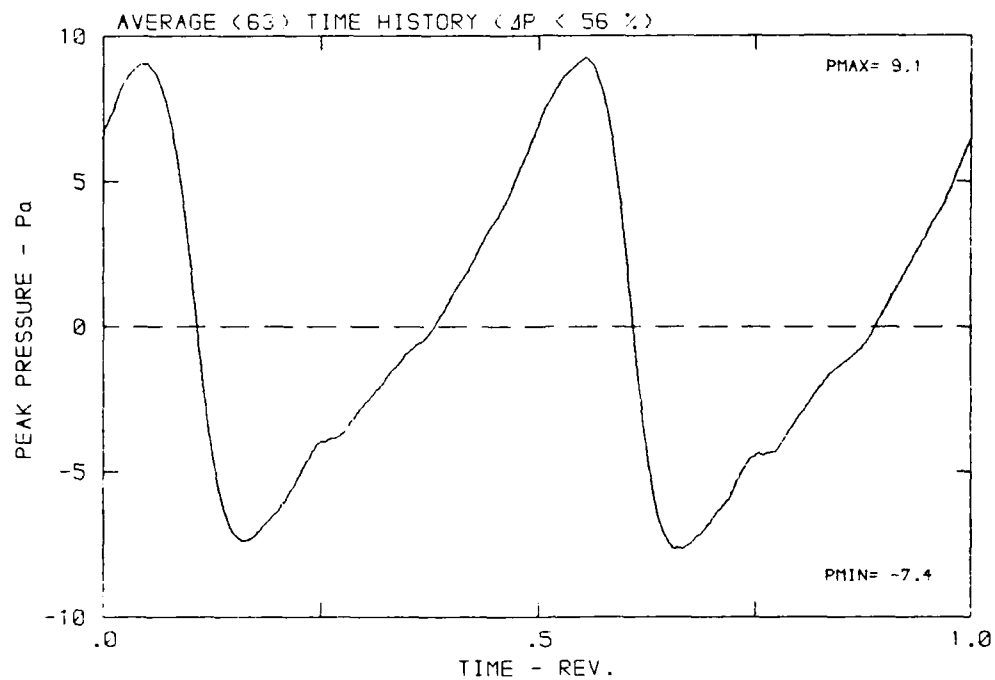
DATA POINT: EN-4 RUN: 160 MP: 3

β : 23.7° MH: .5847 n: 1800 rpm v/u: .268 ϕ : 7.3° T: 286.1 K



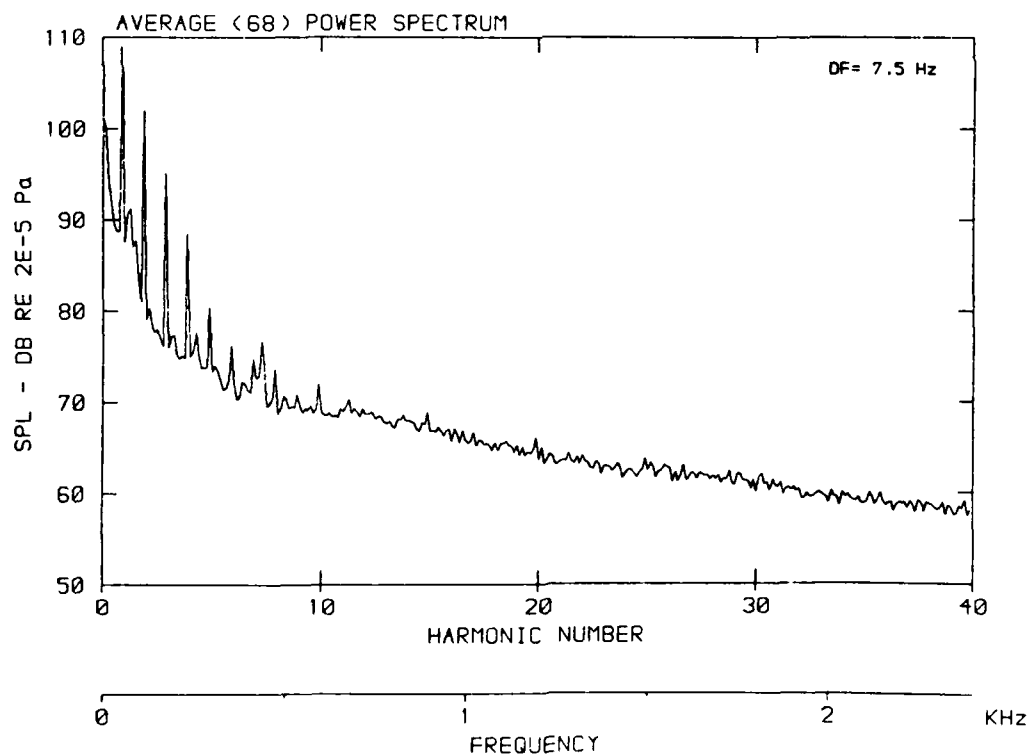
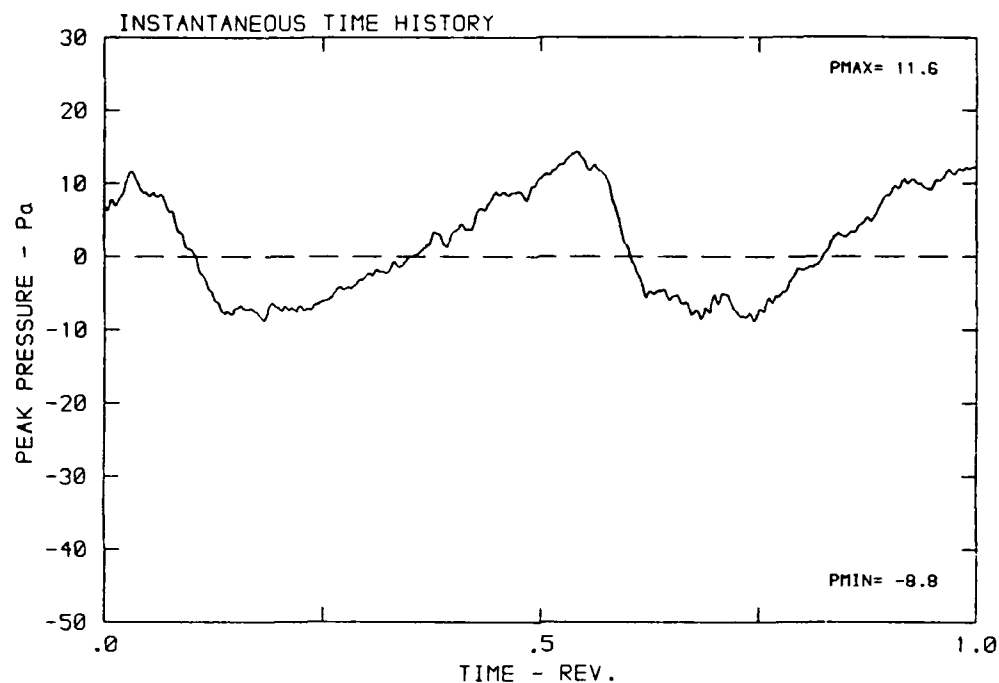
DATA POINT: EN-4 RUN: 160 MP: 3

β : 23.7° MH: .5847 n: 1800 rpm v/u : .268 ϕ : 7.3° T: 286.1 K



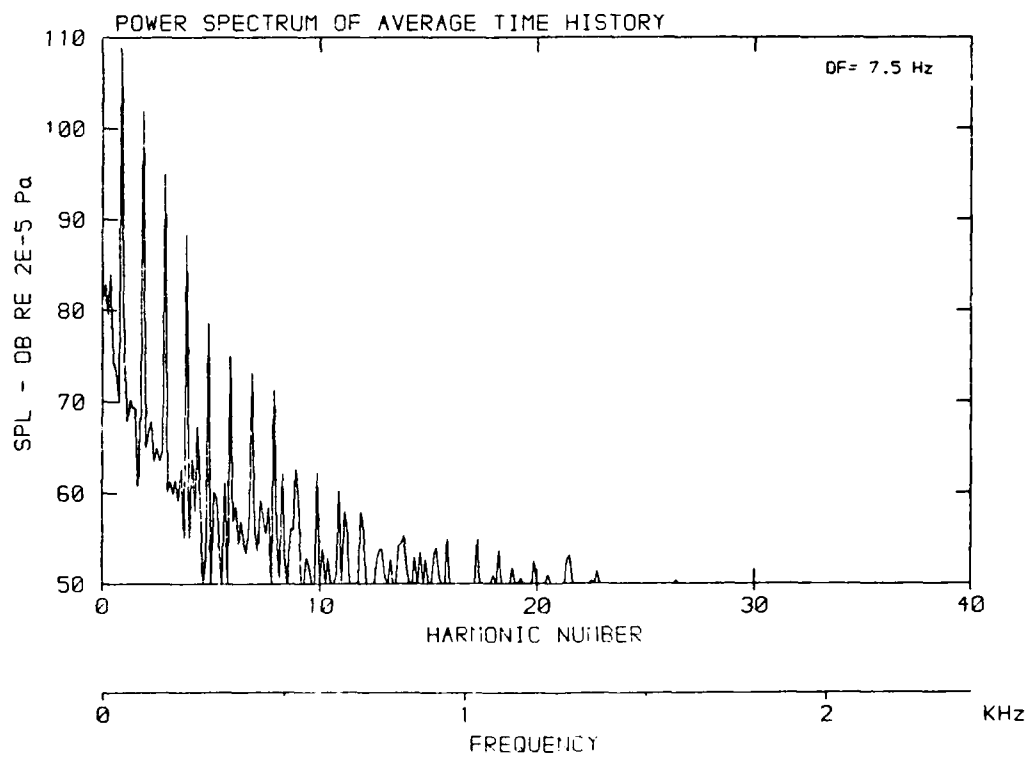
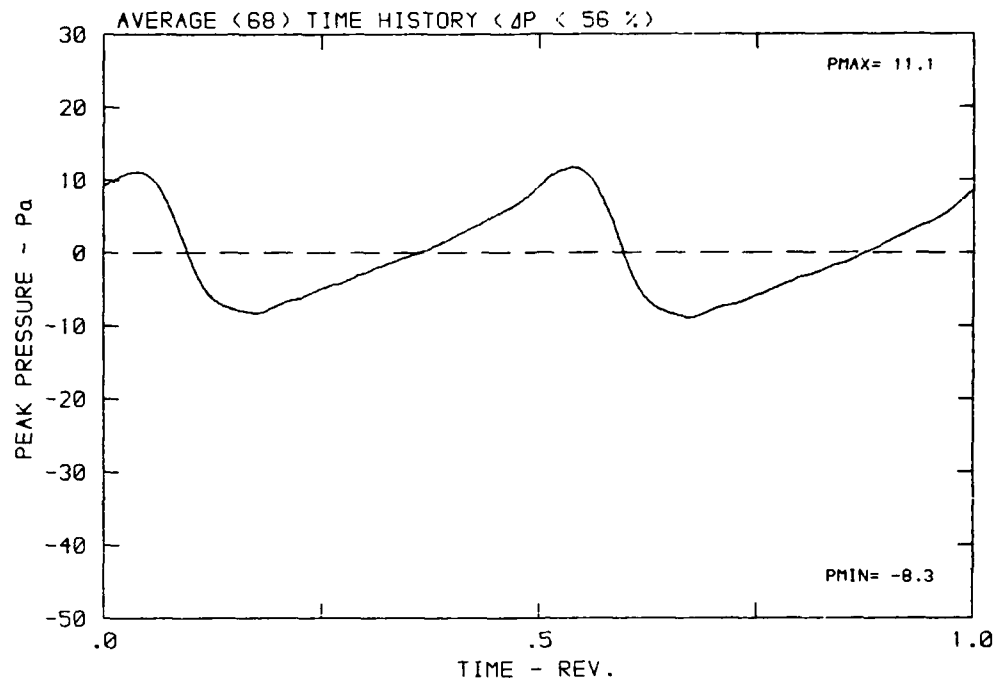
DATA POINT: EN-4 RUN: 160 MP: 4

β : 23.7° MH: .5847 n: 1800 rpm v/u : .268 ϕ : 7.3° T: 286.1 K



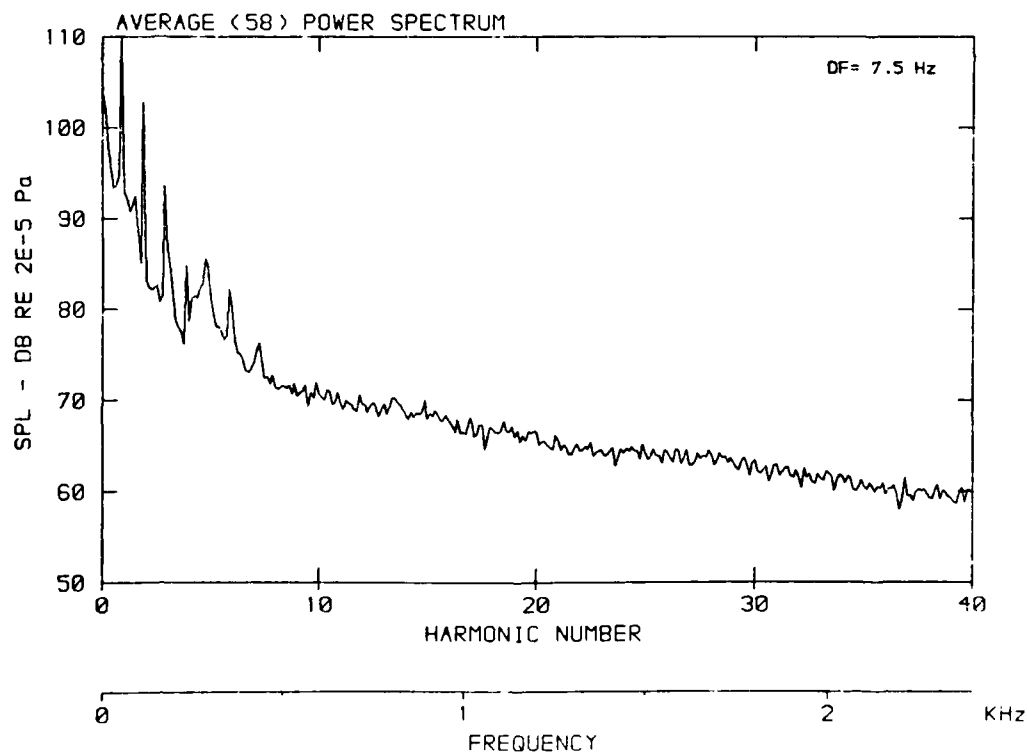
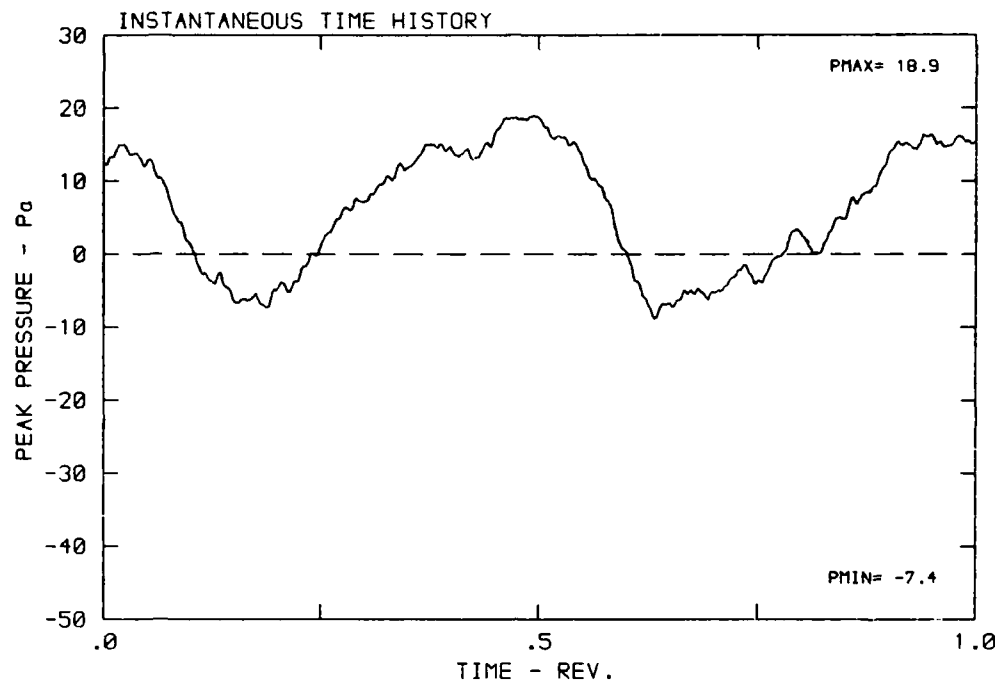
DATA POINT: EN-4 RUN: 160 MP: 4

β : 23.7° MH: .5847 n: 1800 rpm v/u: .268 ϕ : 7.3° T: 286.1 K



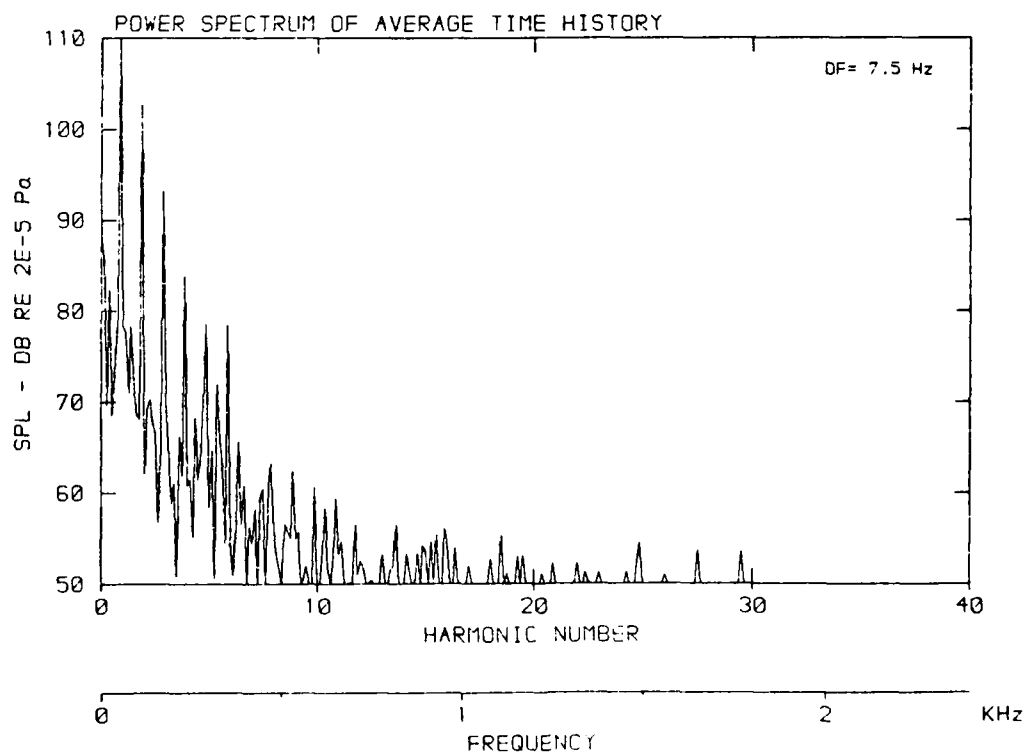
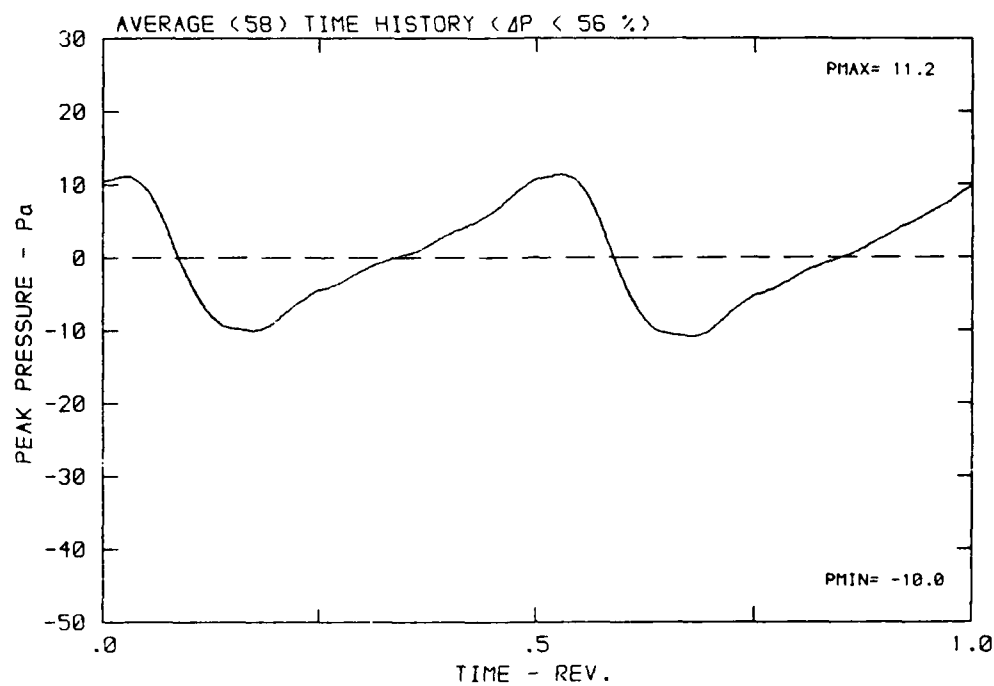
DATA POINT: EN-4 RUN: 160 MP: 5

β : 23.7° MH: .5847 n: 1800 rpm v/u: .268 ϕ : 7.3° T: 286.1 K



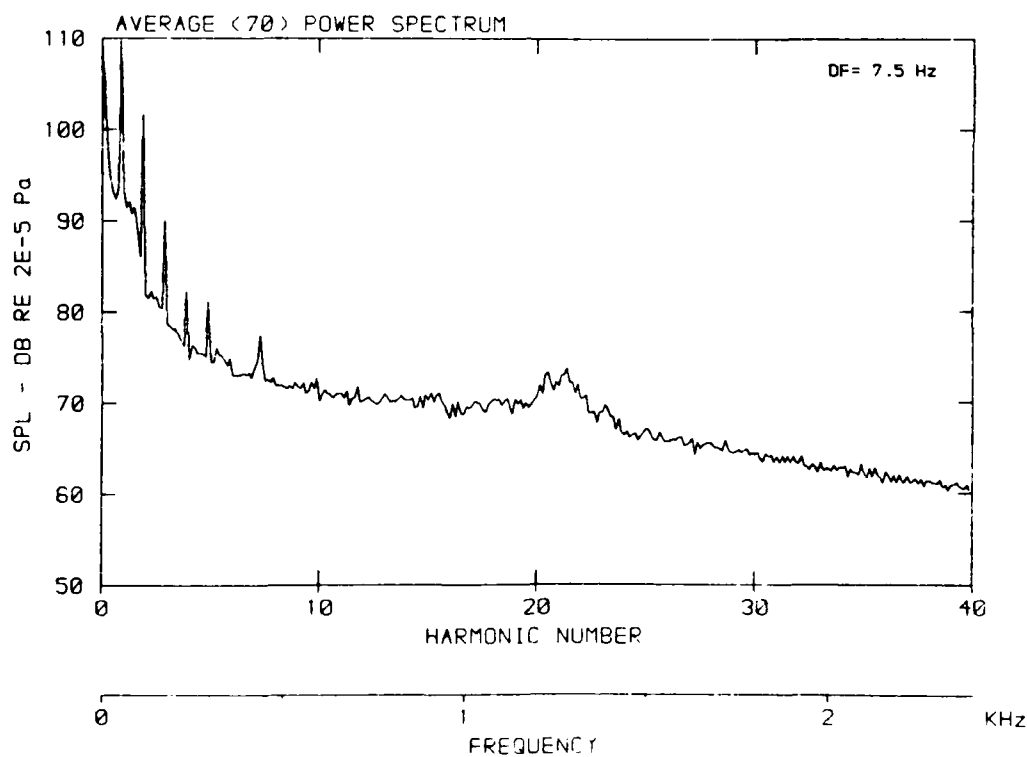
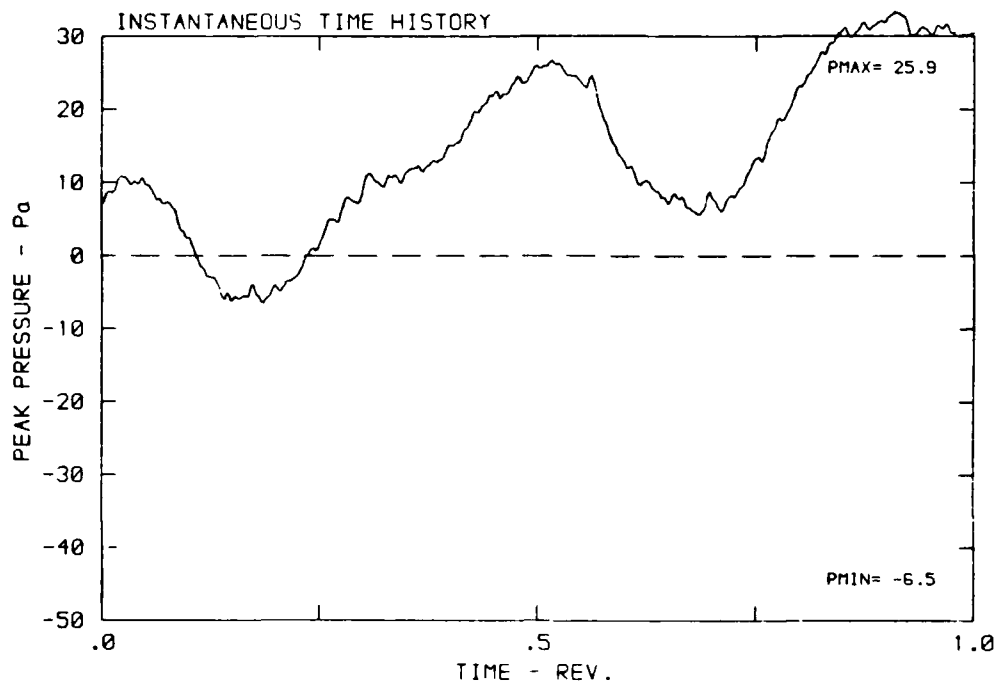
DATA POINT: EN-4 RUN: 160 MP: 5

β : 23.7° MH: .5847 n: 1800 rpm v/u: .268 ϕ : 7.3° T: 286.1 K



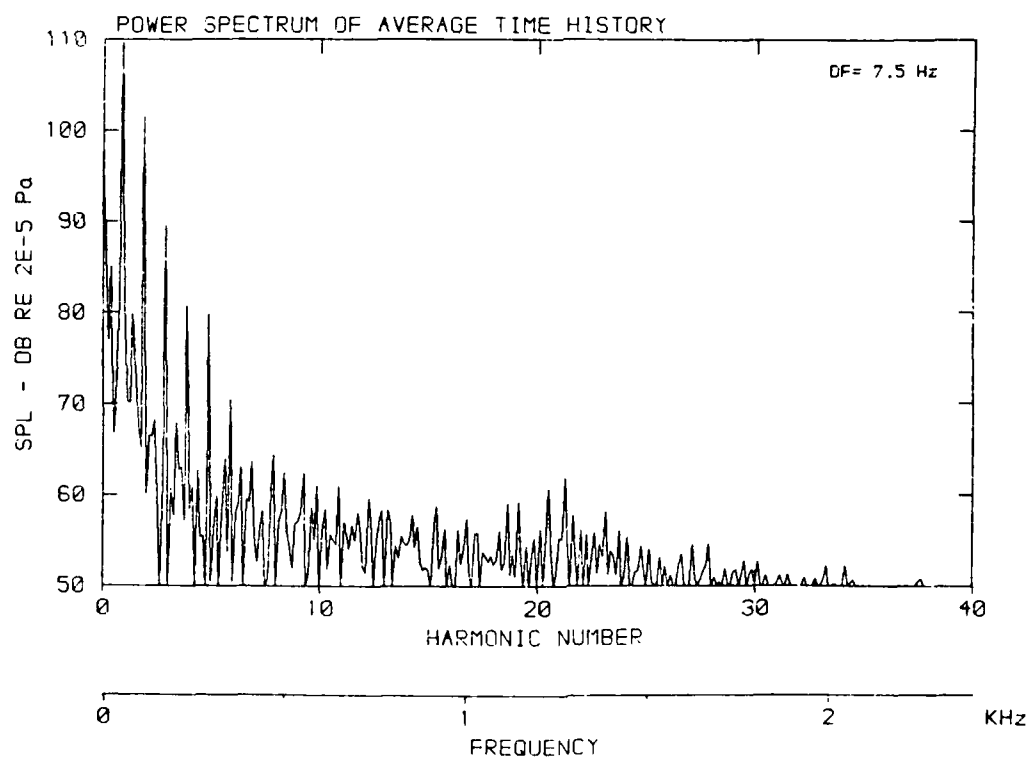
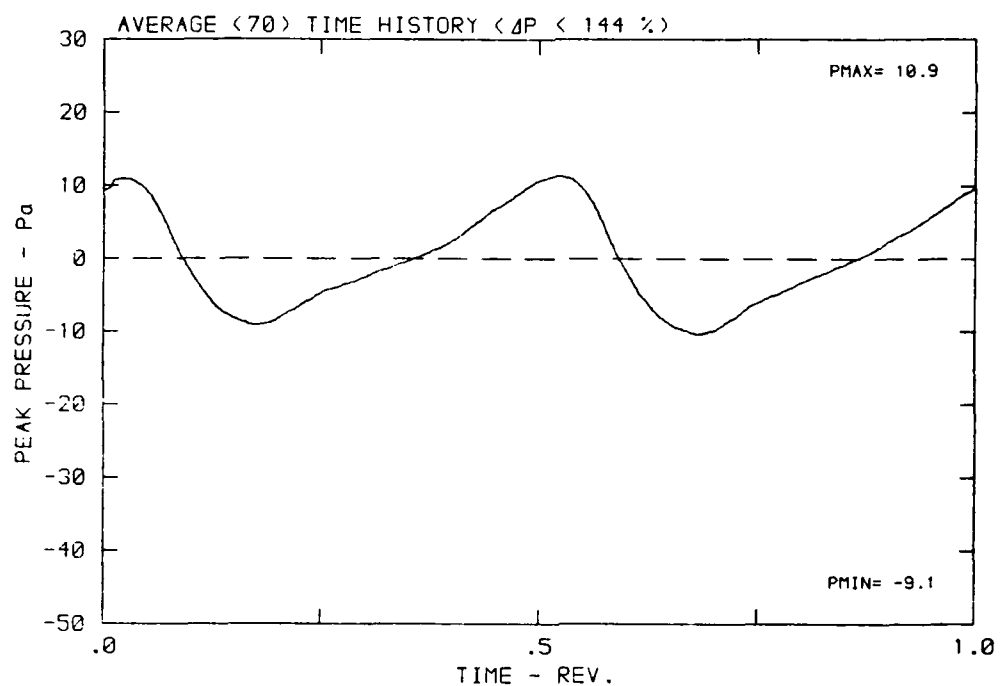
DATA POINT: EN-4 RUN: 160 MP: 6

β : 23.7° MH: .5847 n: 1800 rpm v/u: .268 ϕ : 7.3° T: 286.1 K



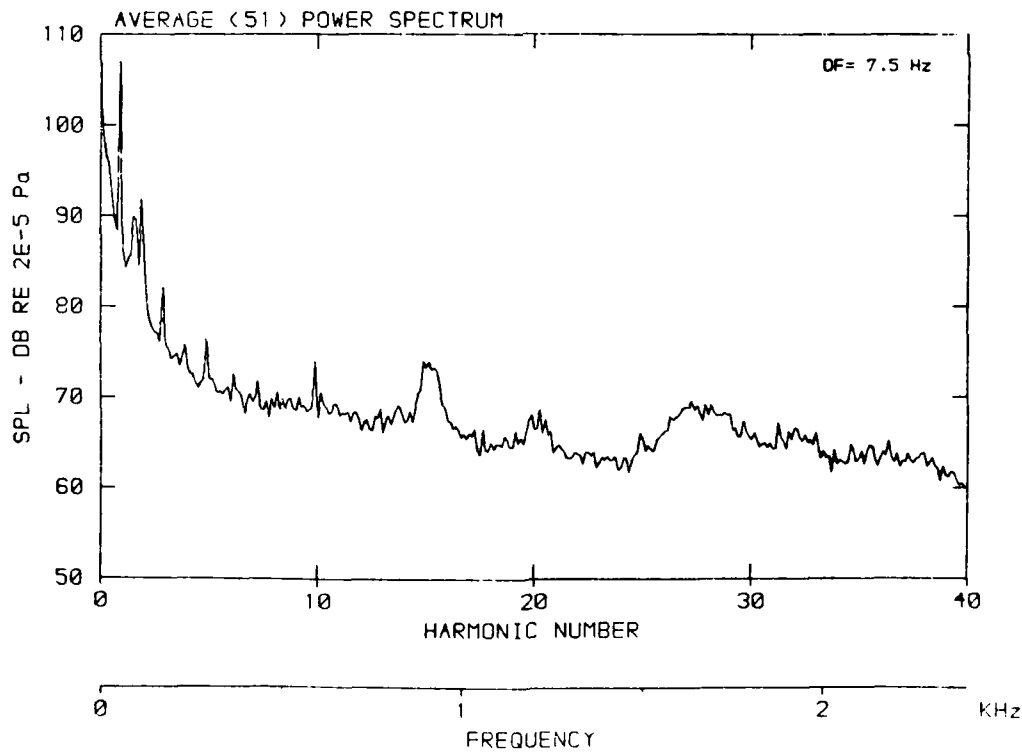
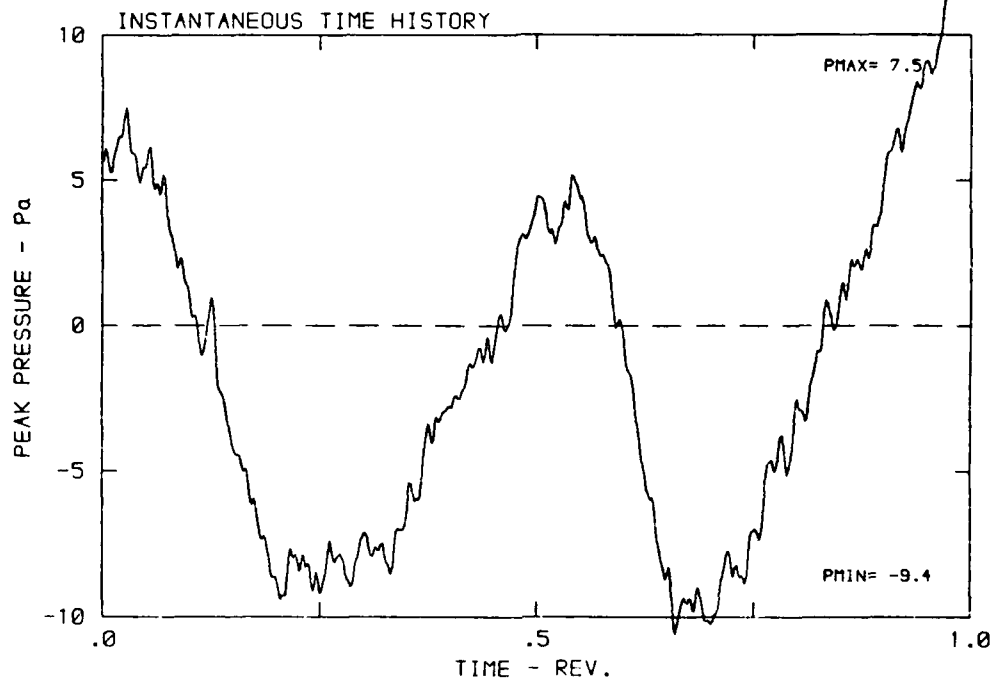
DATA POINT: EN-4 RUN: 160 MP: 6

β : 23.7° MH: .5847 n: 1800 rpm v/u : .268 ϕ : 7.3° T: 286.1 K



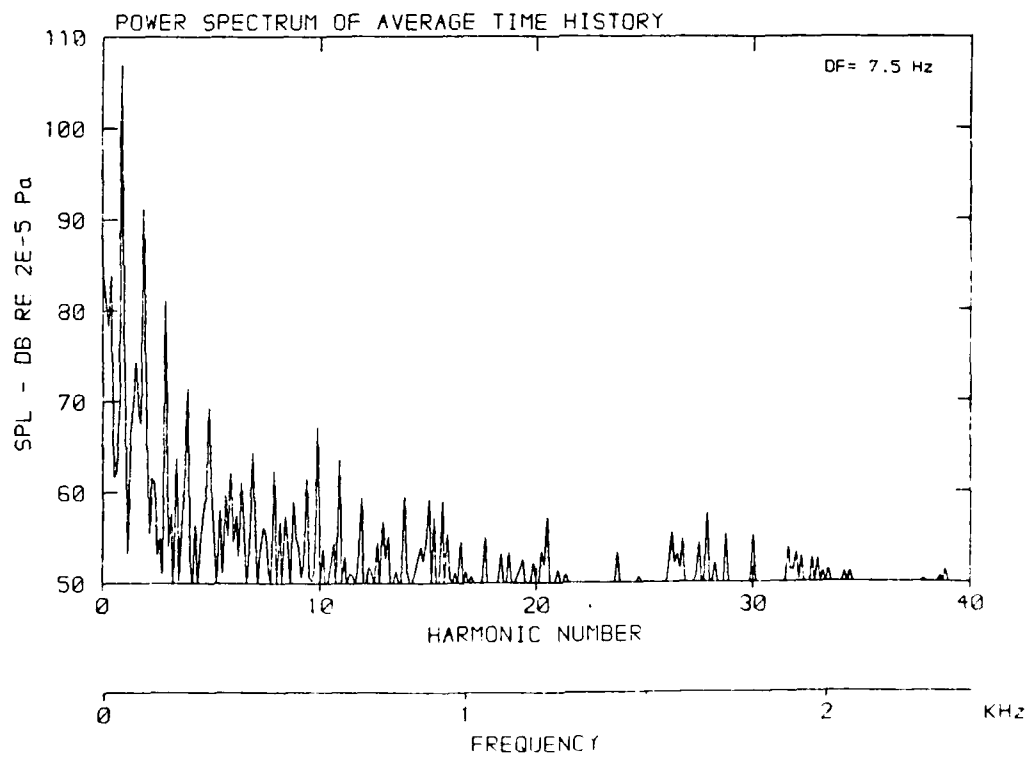
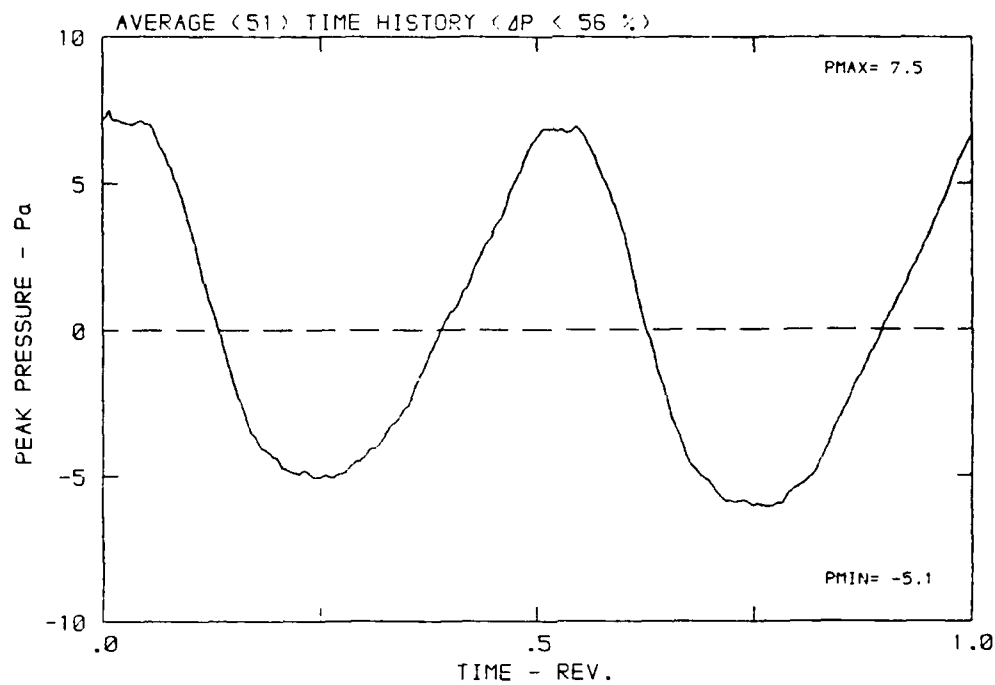
DATA POINT: EN-4 RUN: 160 MP: 7

β : 23.7° MH: .5847 n: 1800 rpm v/u : .268 ϕ : 7.3° T: 286.1 K



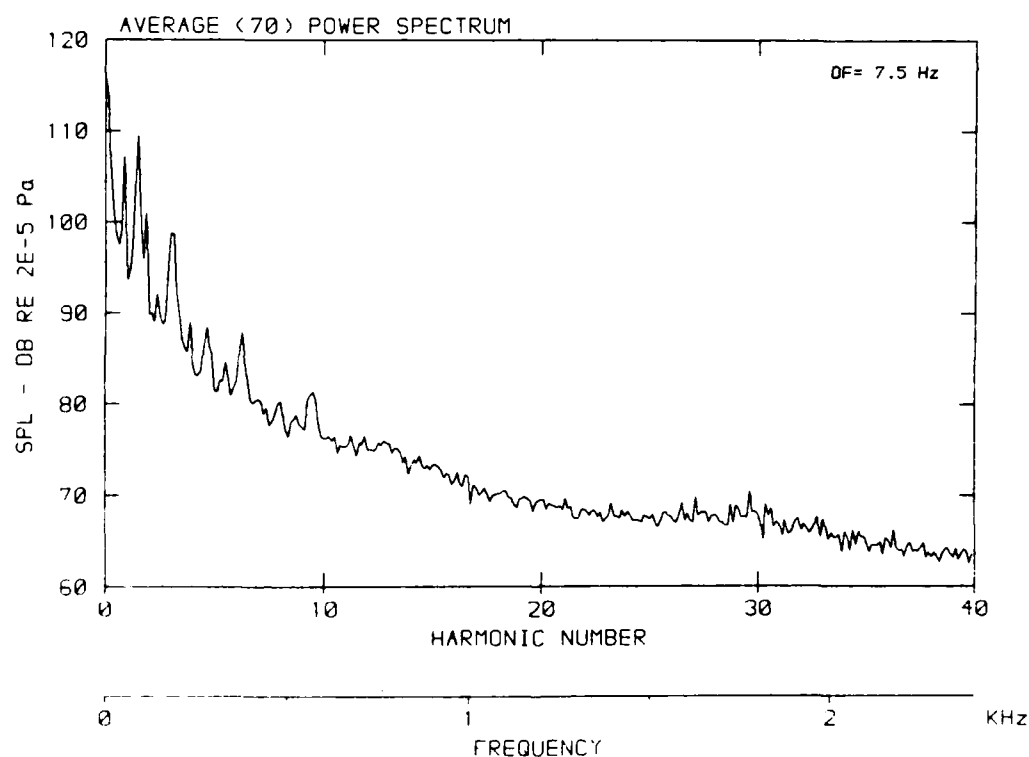
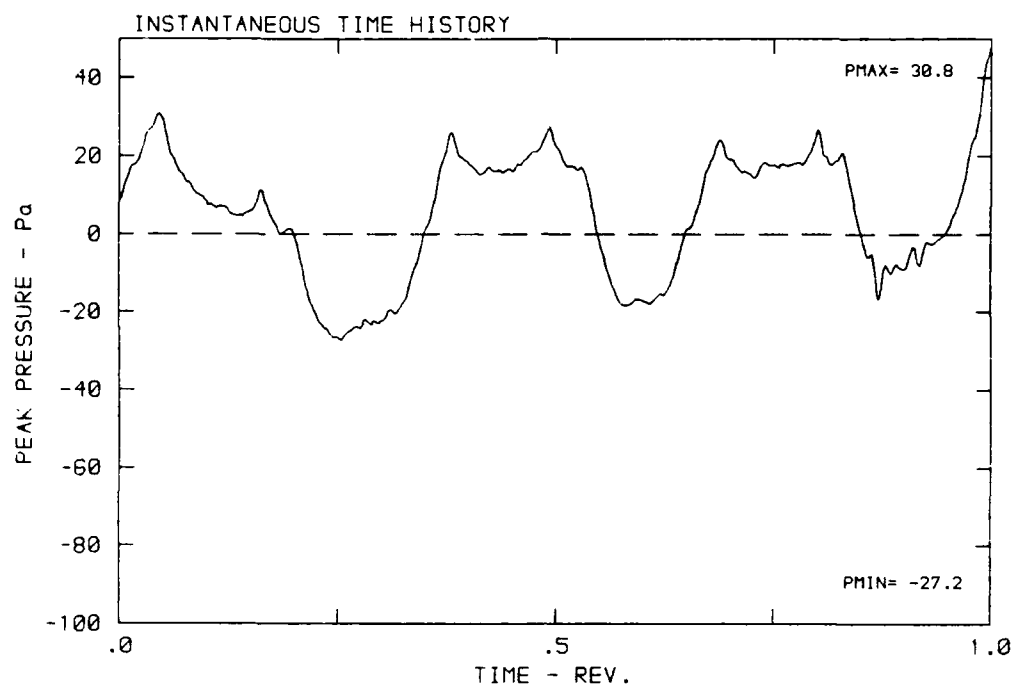
DATA POINT: EN-4 RUN: 160 MP: 7

β : 23.7° MH: .5847 n: 1800 rpm v/u: .268 ϕ : 7.3° T: 286.1 K



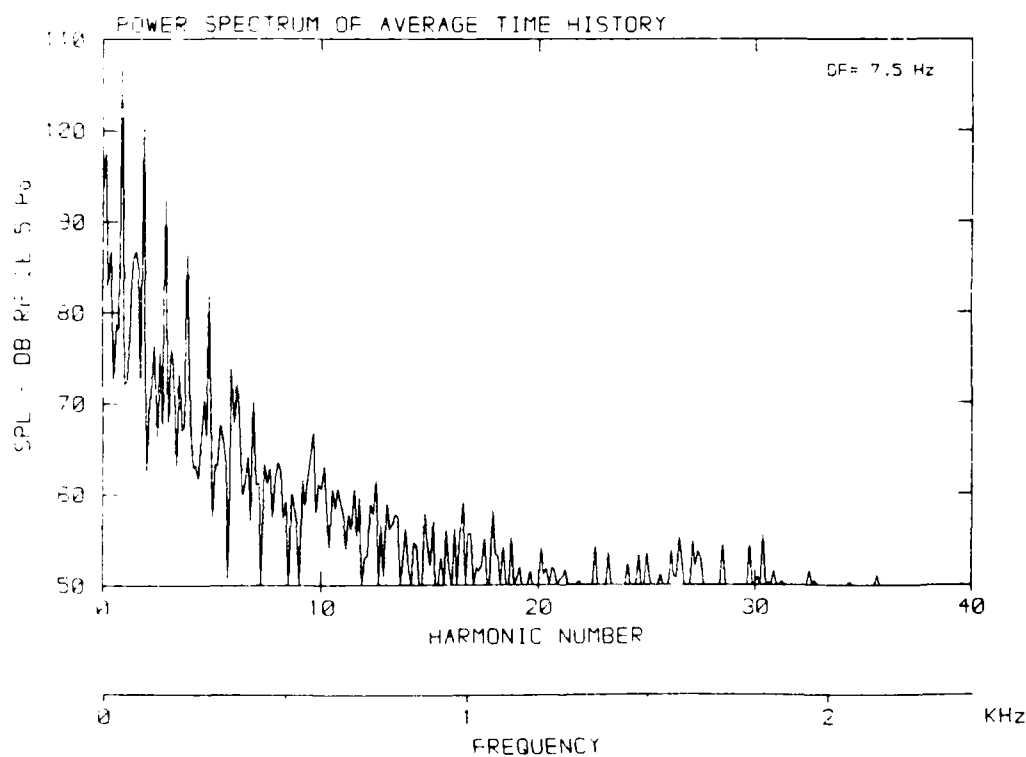
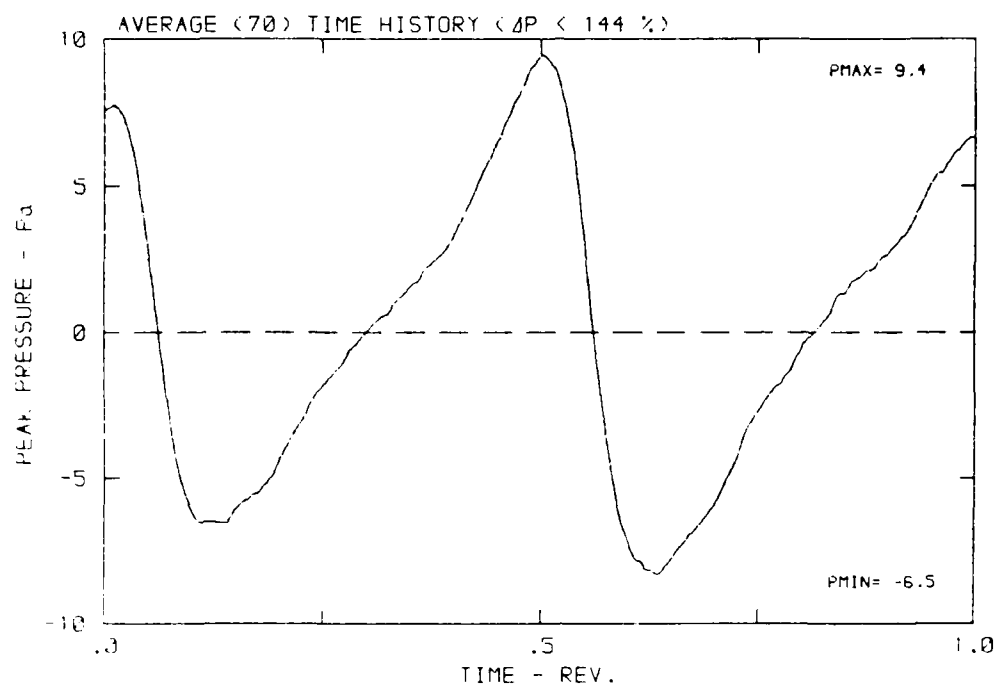
DATA POINT: EN-4 RUN: 160 MP: 8

β : 23.7° MH: .5847 n: 1800 rpm v/u: .268 ϕ : 7.3° T: 286.1 K



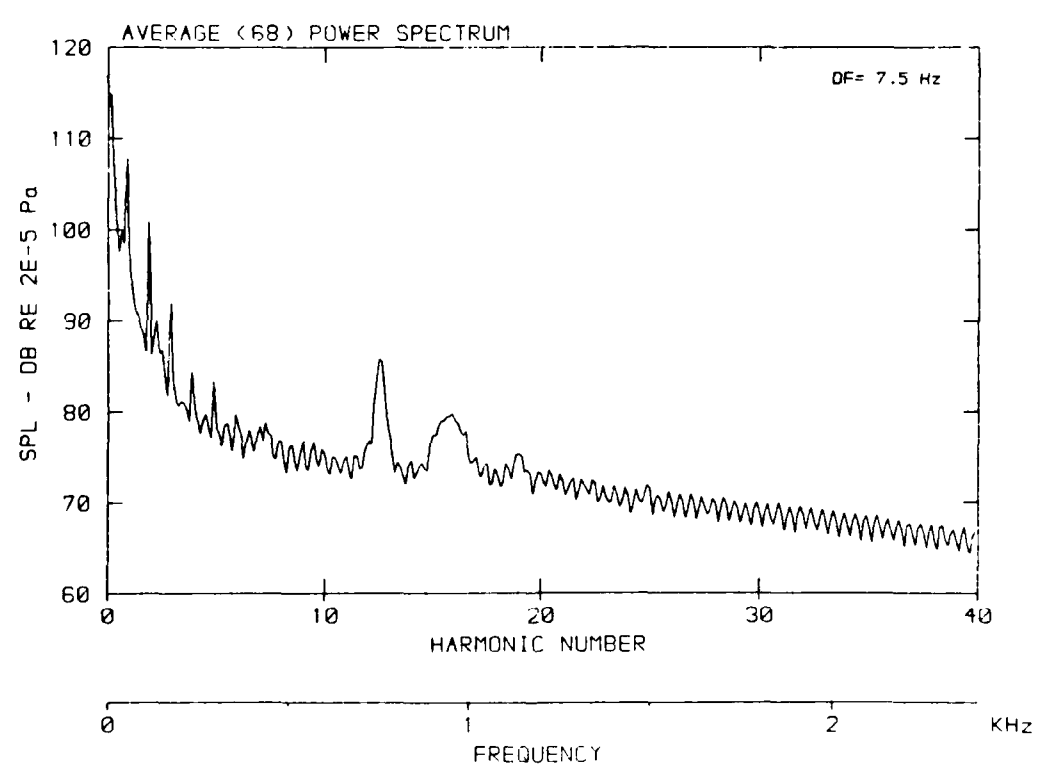
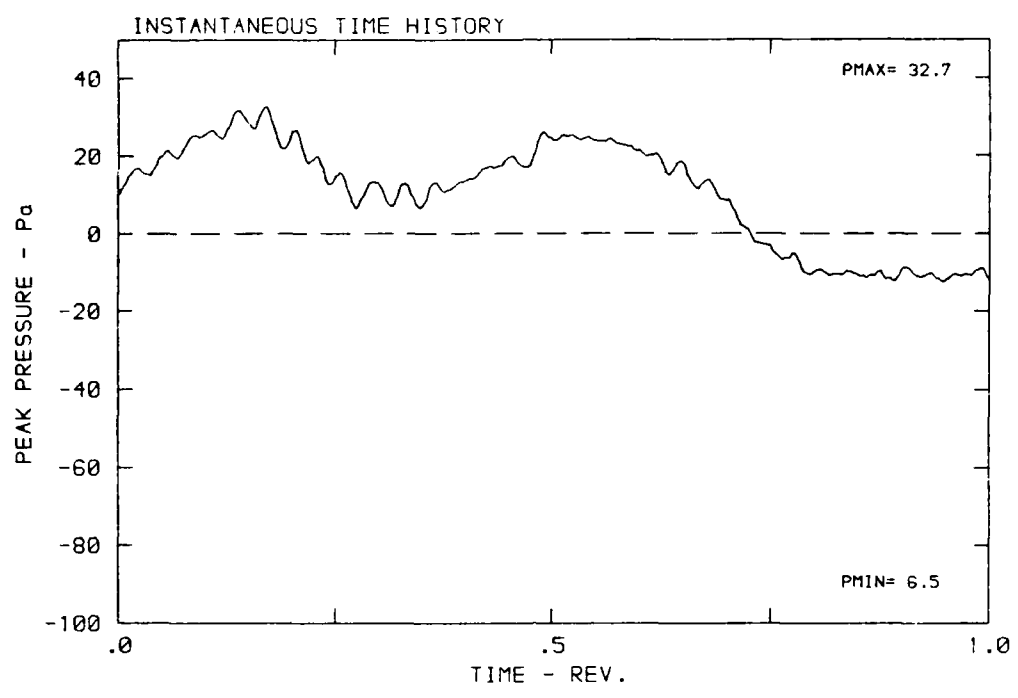
DATA POINT: EN-4 RUN: 160 MP: 8

β : 23.7° MH: .5847 n: 1800 rpm v/u: .268 ϕ : 7.3° T: 286.1 K



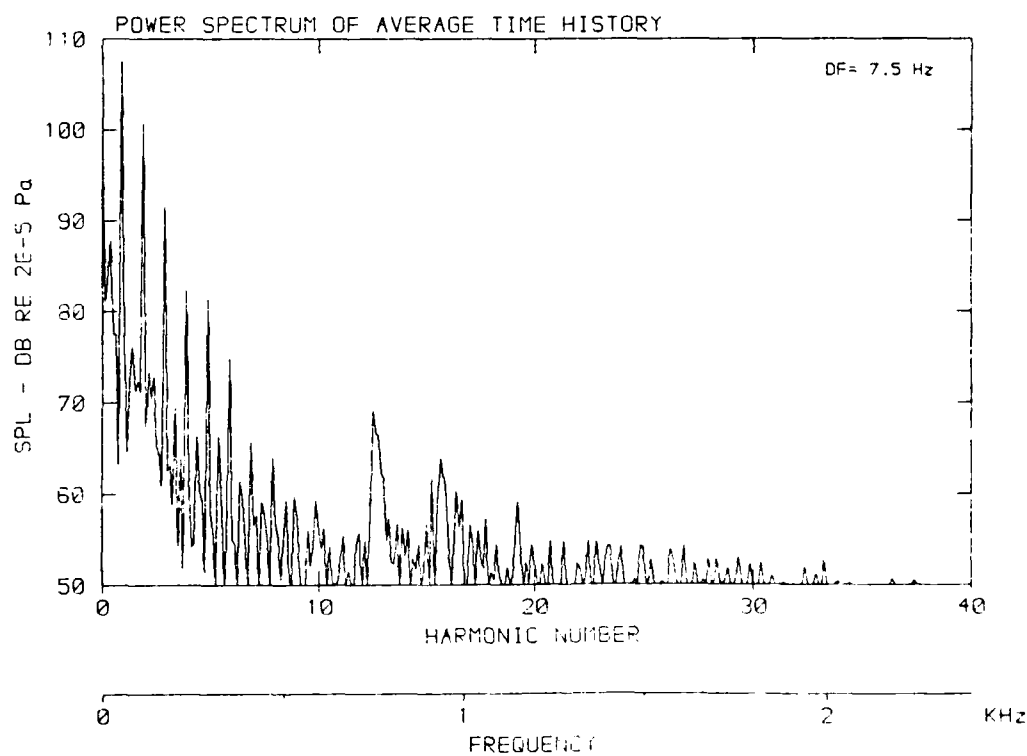
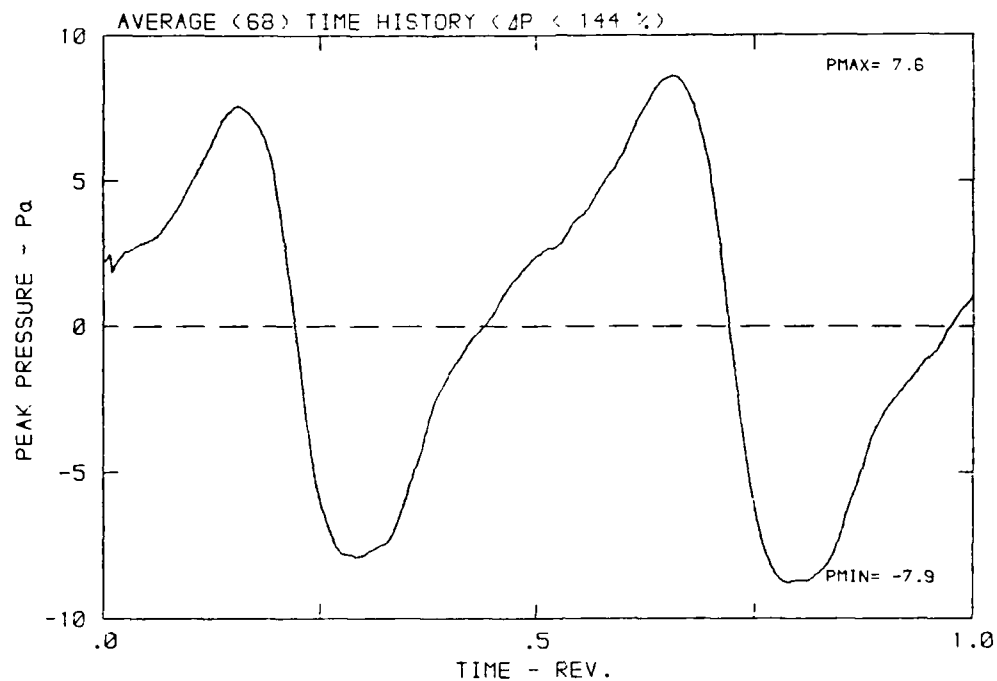
DATA POINT: EN-4 RUN: 160 MP: 9

β : 23.7° MH: .5847 n: 1800 rpm v/u: .268 ϕ : 7.3° T: 286.1 K



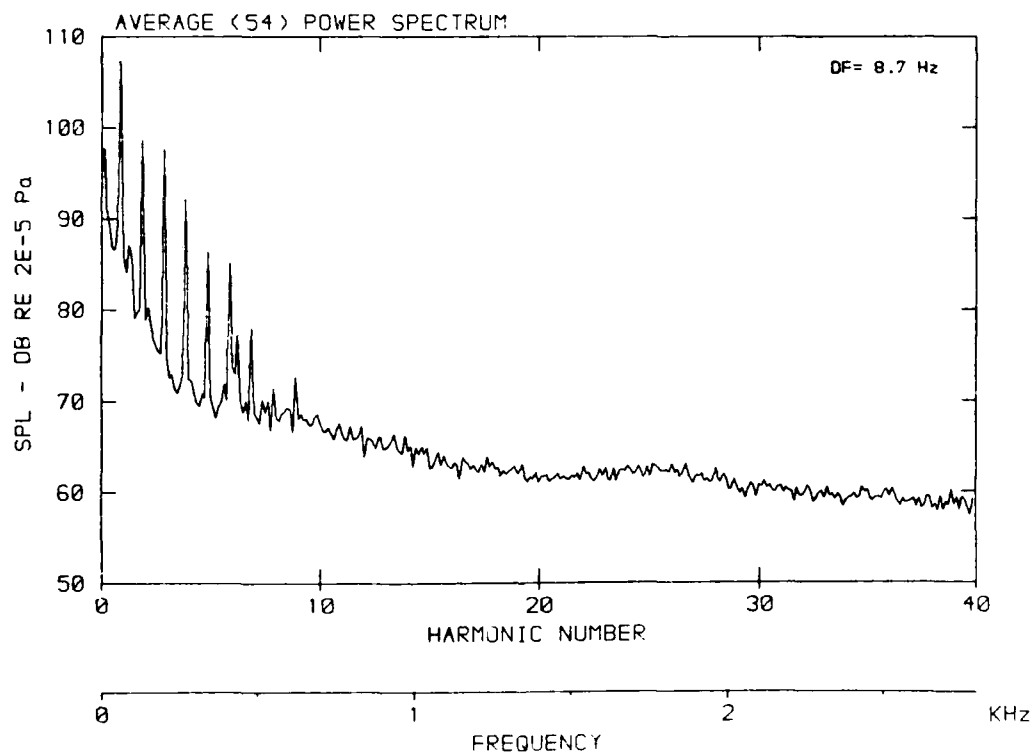
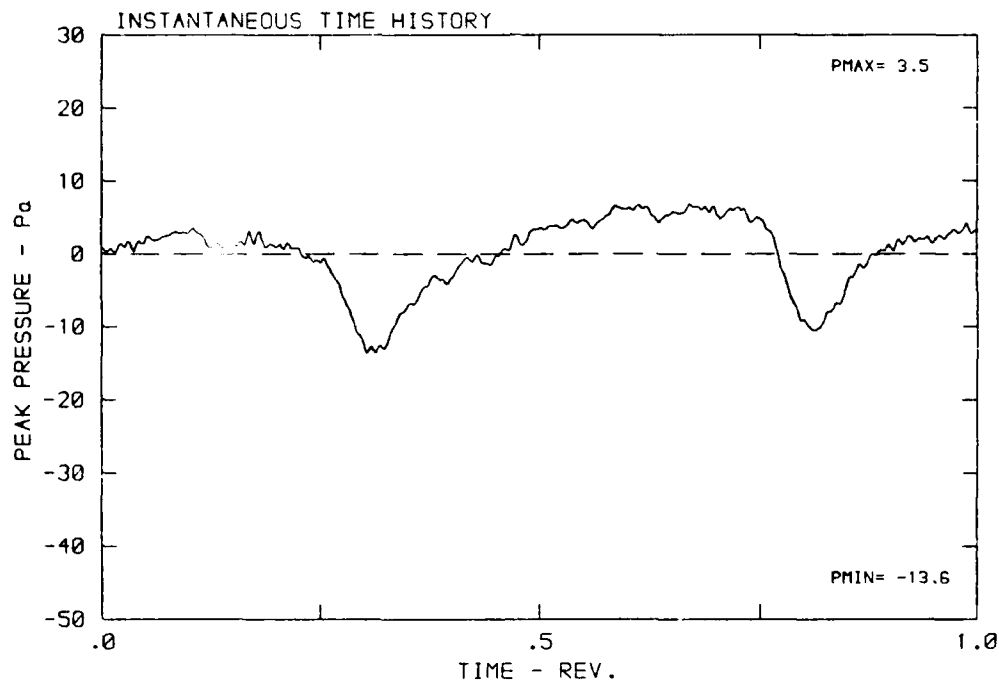
DATA POINT: EN-4 RUN: 160 MP: 9

β : 23.7° MH: .5847 n: 1800 rpm v/u: .268 ϕ : 7.3° T: 286.1 K



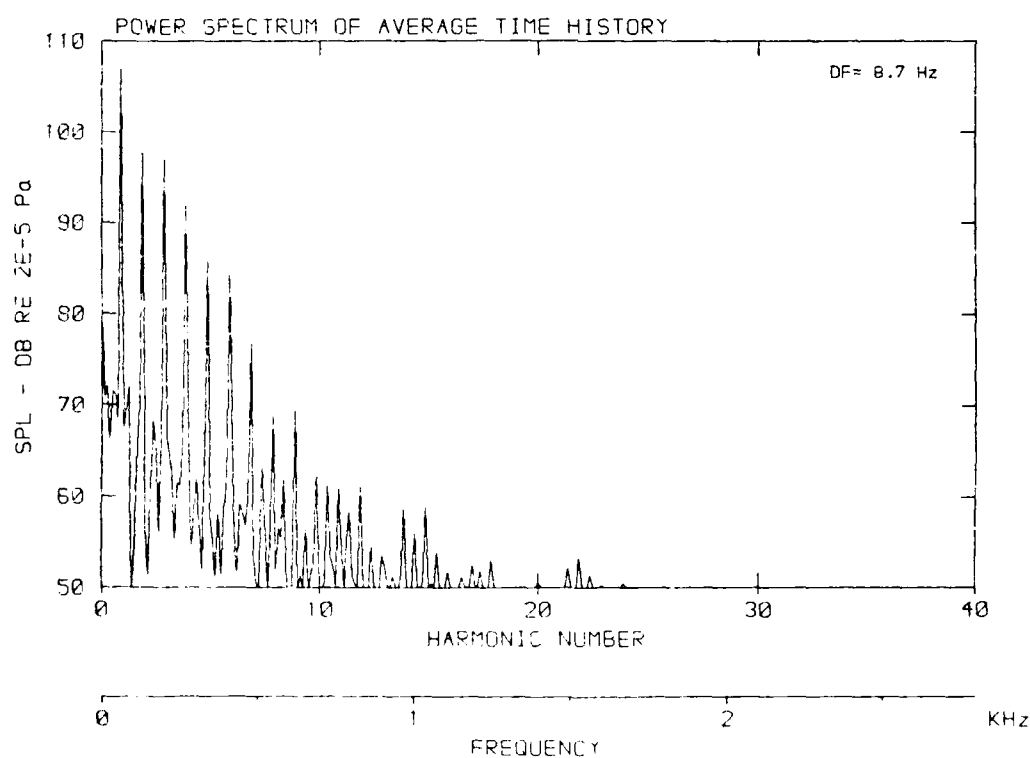
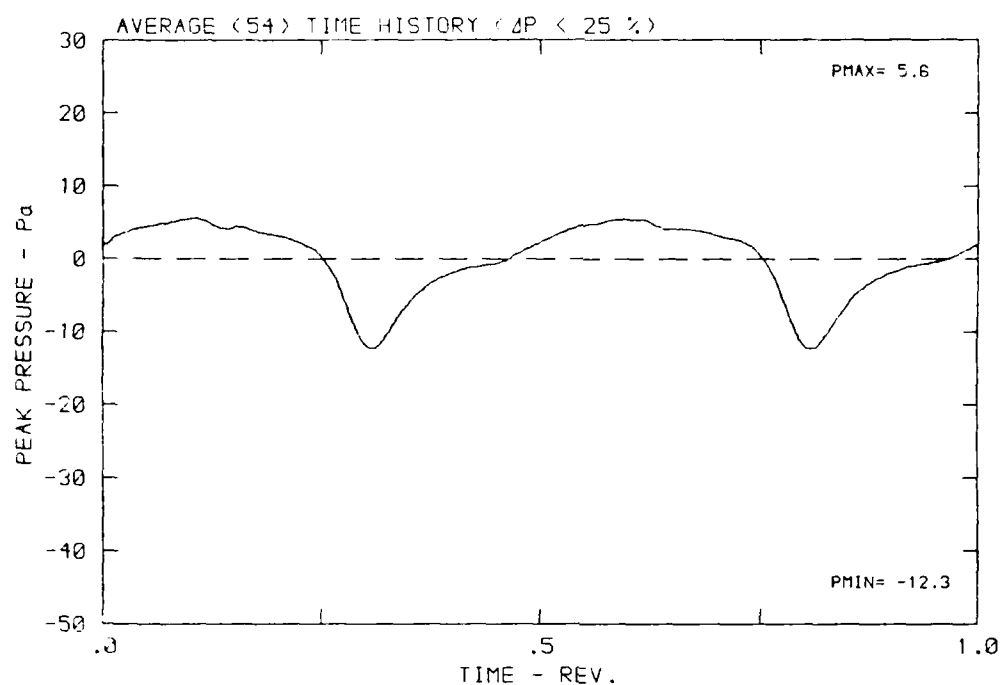
DATA POINT: EN-5 RUN: 161 MP: 1

β : 23.7° MH: .6755 n: 2100 rpm v/u: .231 ϕ : 7.3° T: 286.7 K



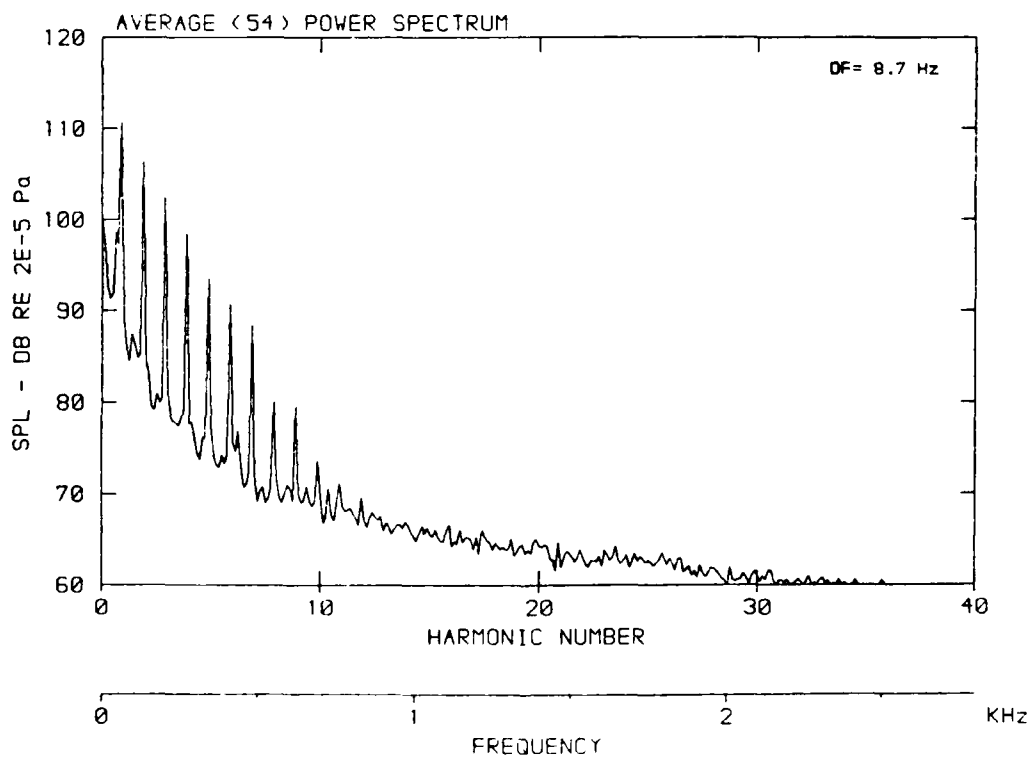
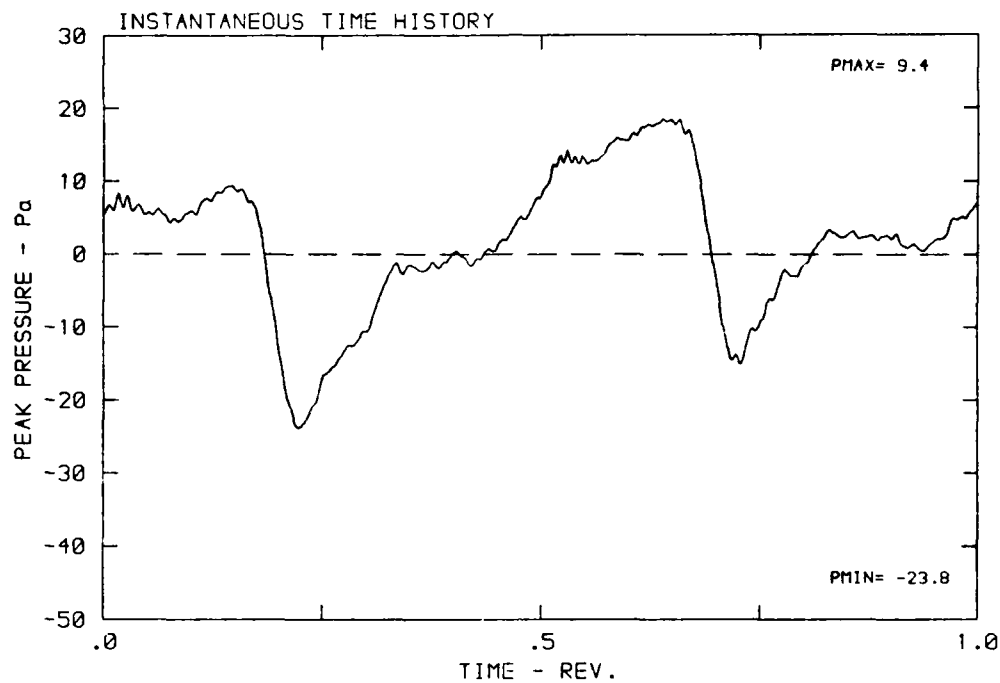
DATA POINT: EN-5 RUN: 161 MP: 1

β : 23.7° MH: .6755 n: 2100 rpm v/u : .231 ϕ : 7.3° T: 286.7 K



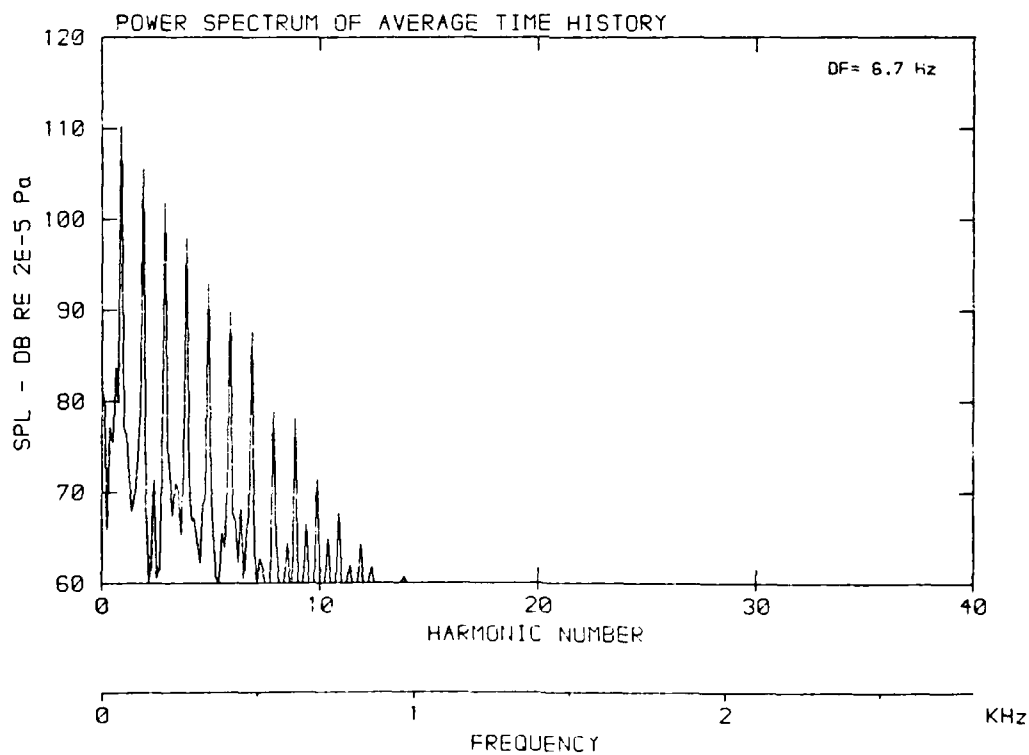
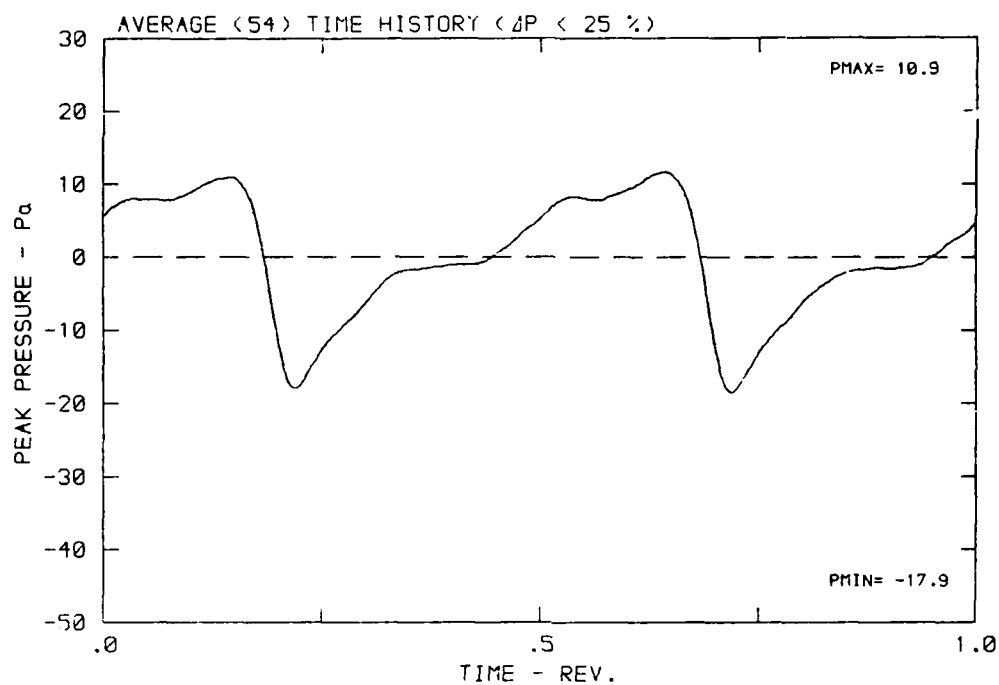
DATA POINT: EN-5 RUN: 161 MP: 2

β : 23.7° MH: .6755 n: 2100 rpm v/u: .231 ϕ : 7.3° T: 286.7 K



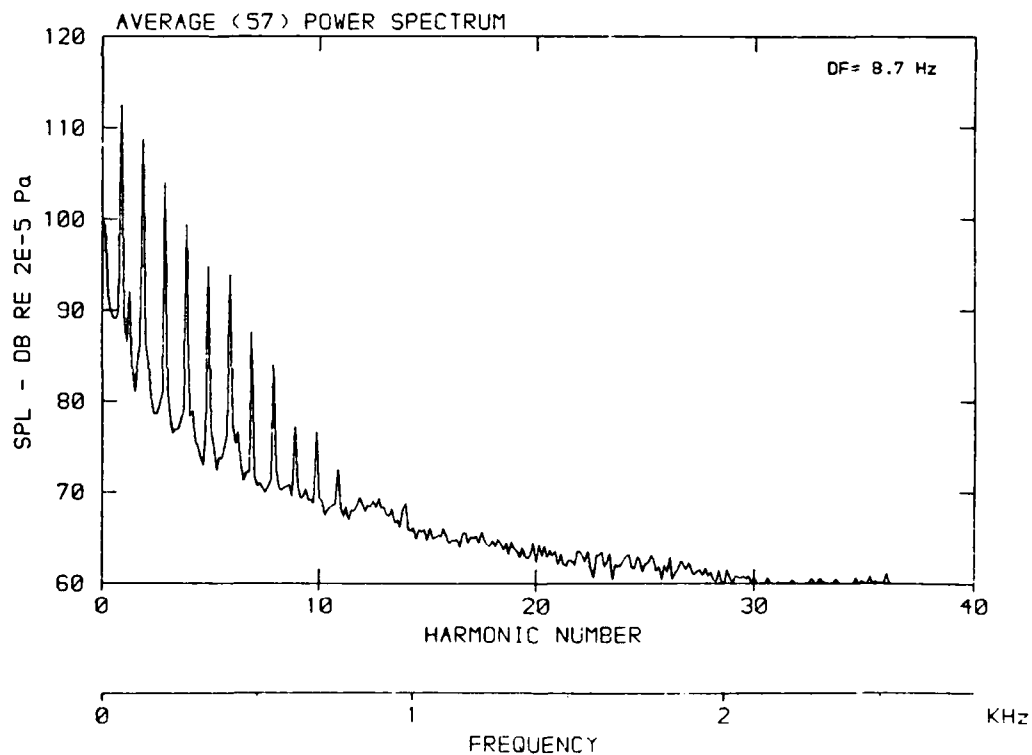
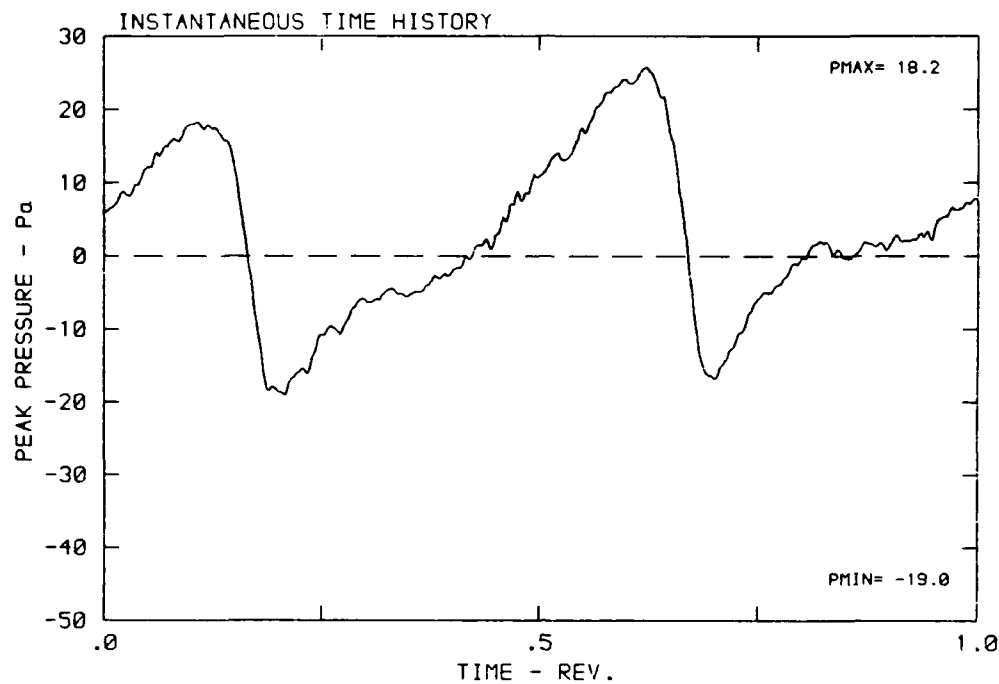
DATA POINT: EN-5 RUN: 161 MP: 2

β : 23.7° MH: .6755 n: 2100 rpm v/u : .231 ϕ : 7.3° T: 286.7 K



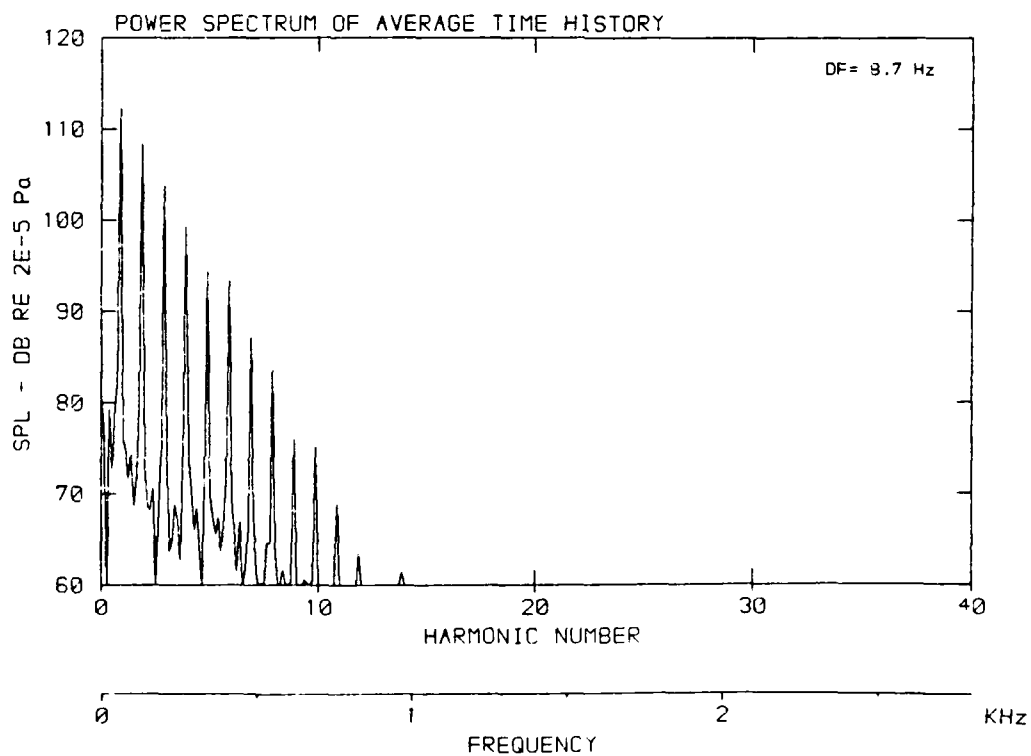
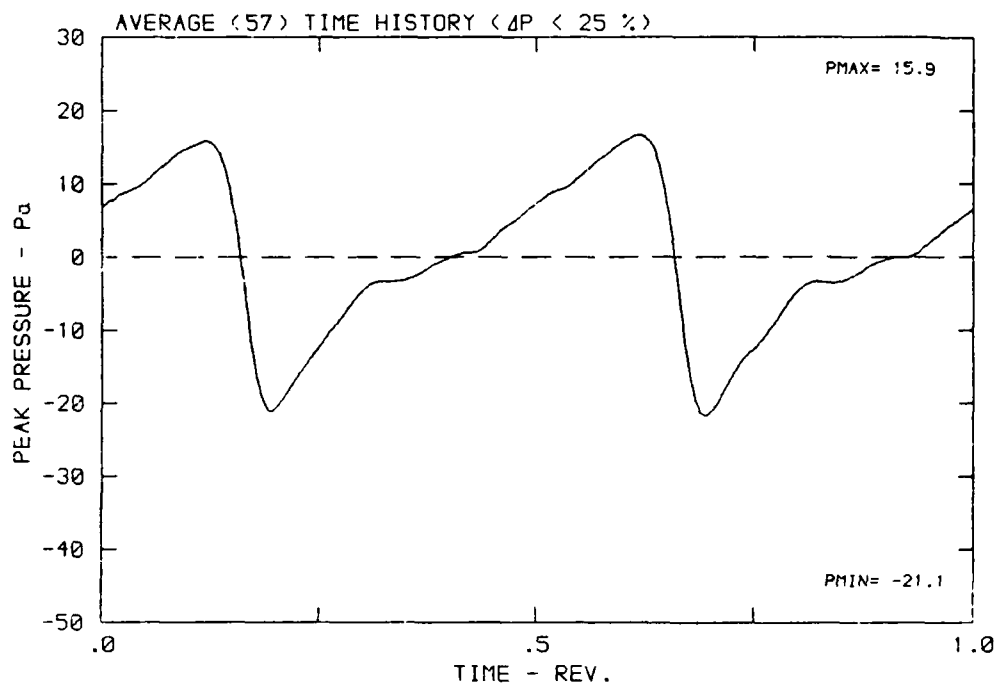
DATA POINT: EN-5 RUN: 161 MP: 3

β : 23.7° MH: .6755 n: 2100 rpm v/u: .231 ϕ : 7.3° T: 286.7 K



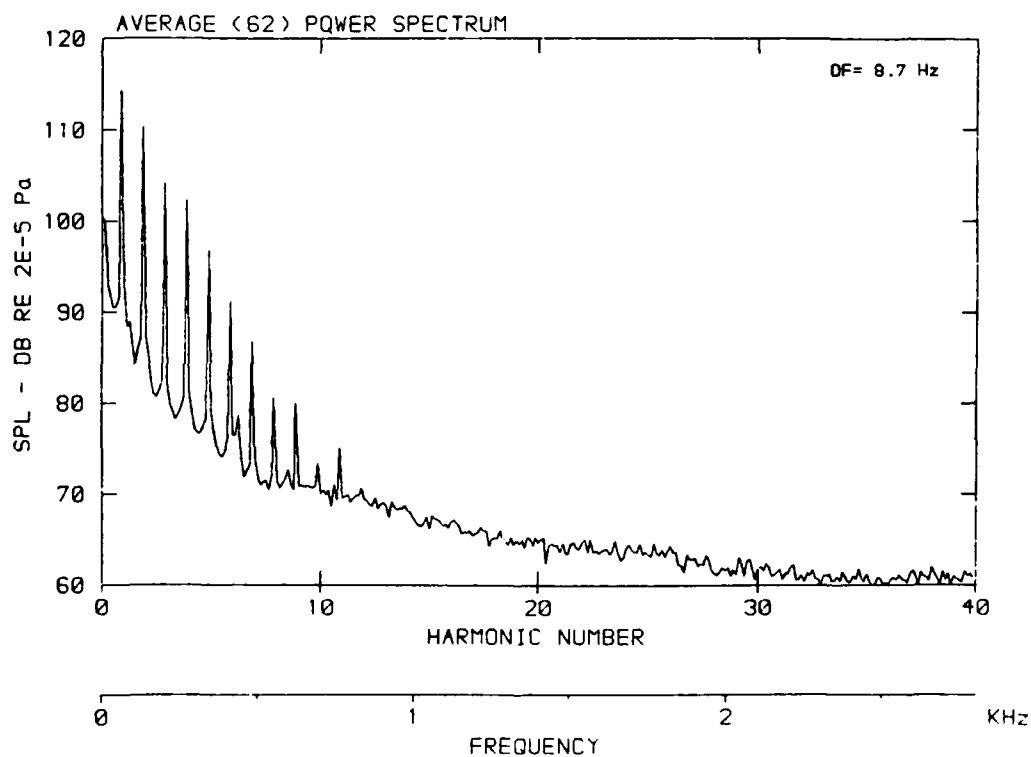
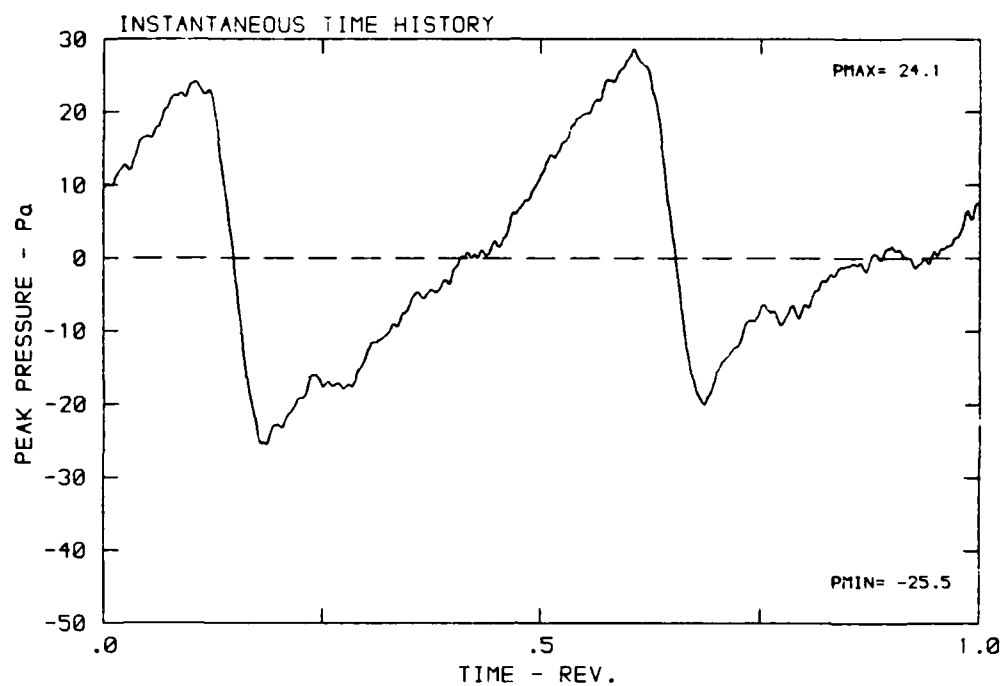
DATA POINT: EN-5 RUN: 161 MP: 3

β : 23.7° MH: .6755 n: 2100 rpm v/u : .231 ϕ : 7.3° T: 286.7 K



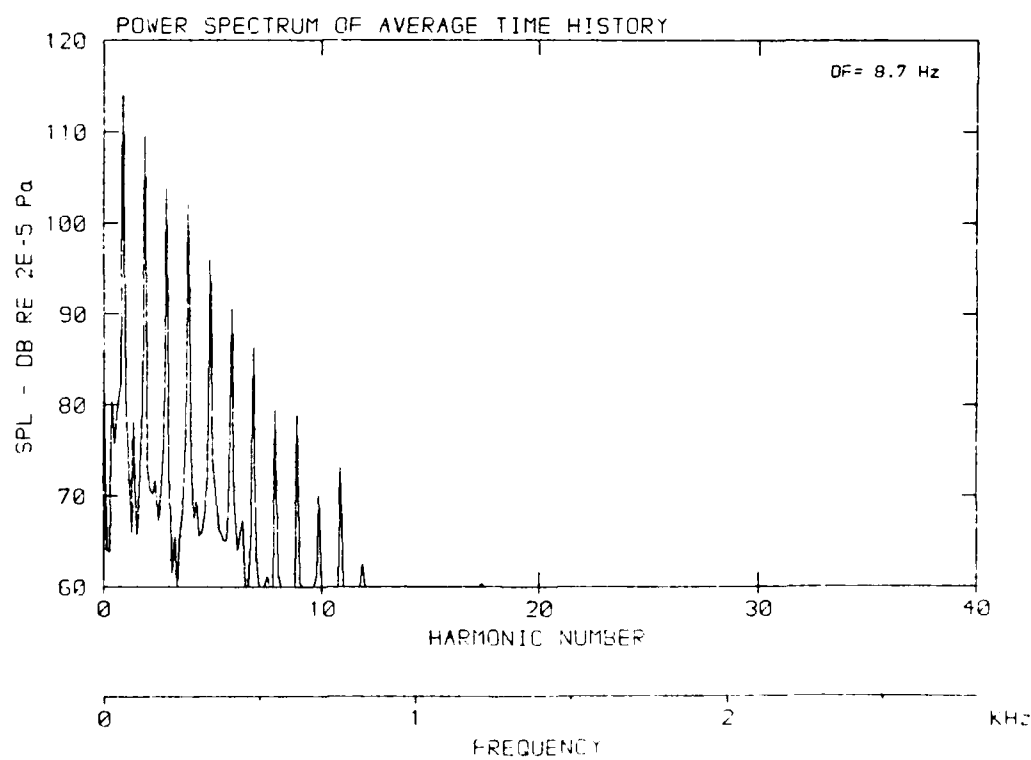
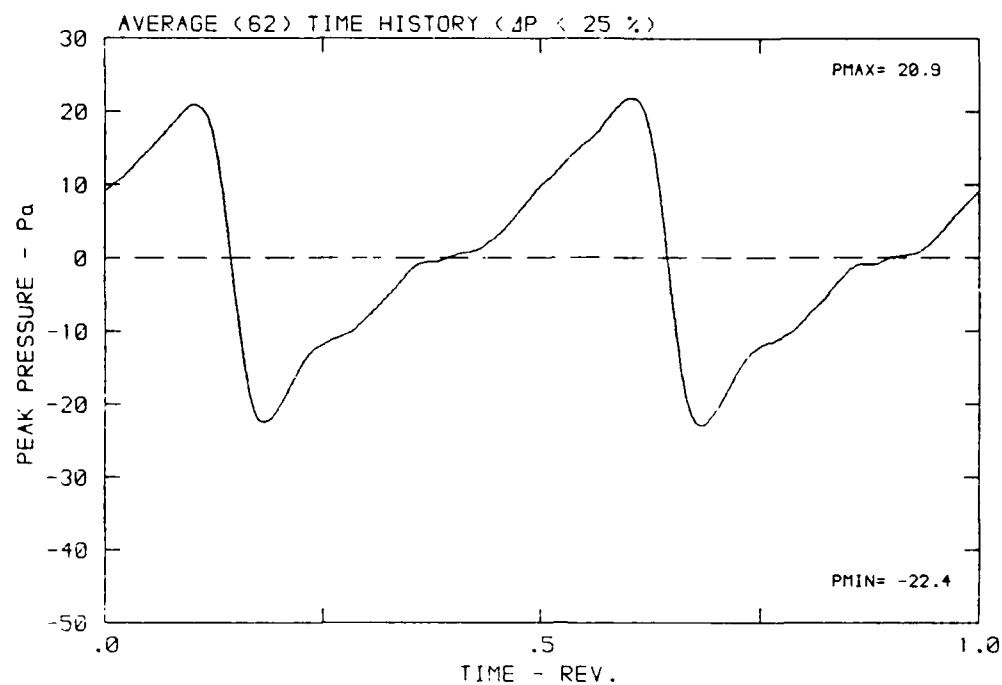
DATA POINT: EN-5 RUN: 161 MP: 4

β : 23.7° MH: .6755 n: 2100 rpm v/u: .231 ϕ : 7.3° T: 286.7 K



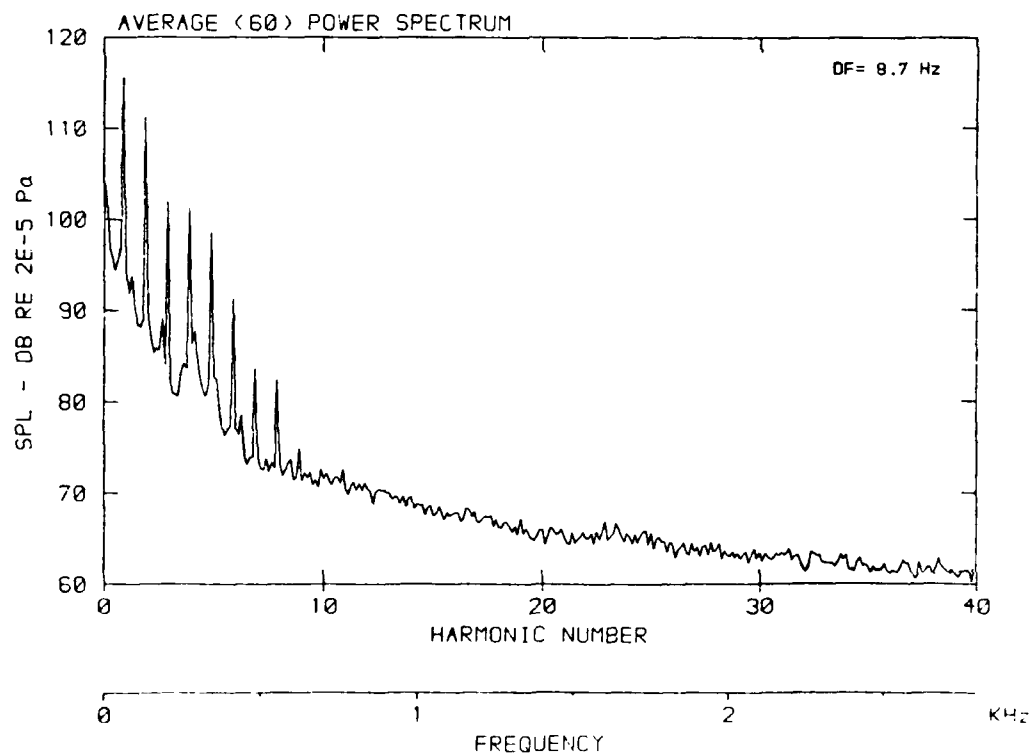
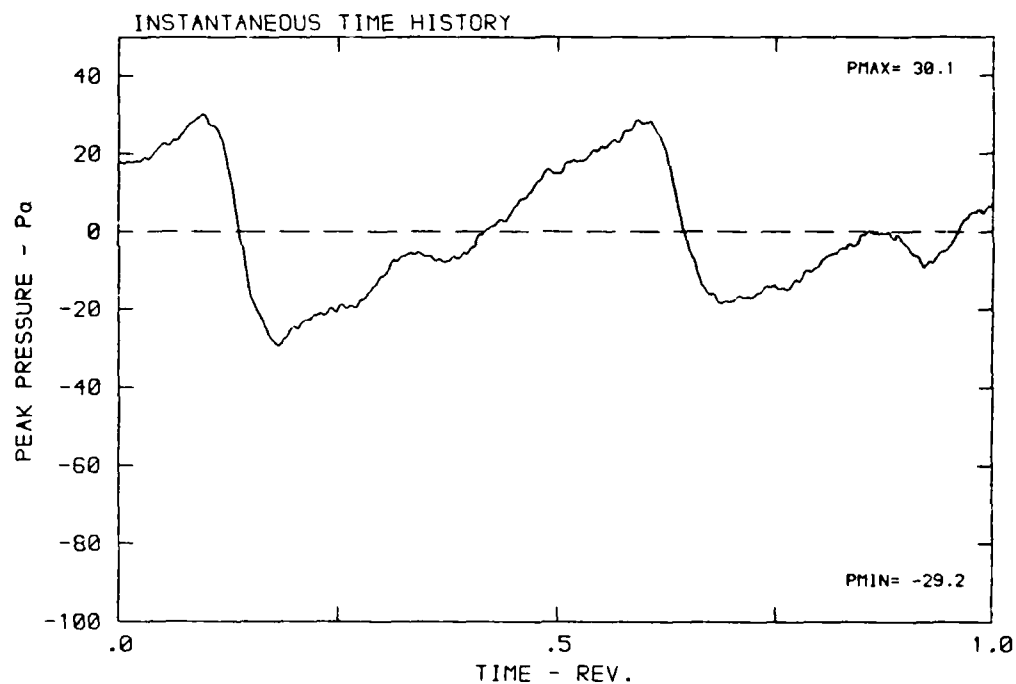
DATA POINT: EN-5 RUN: 161 MP: 4

β : 23.7° MH: .6755 n: 2100 rpm v/u : .231 ϕ : 7.3° T: 286.7 K



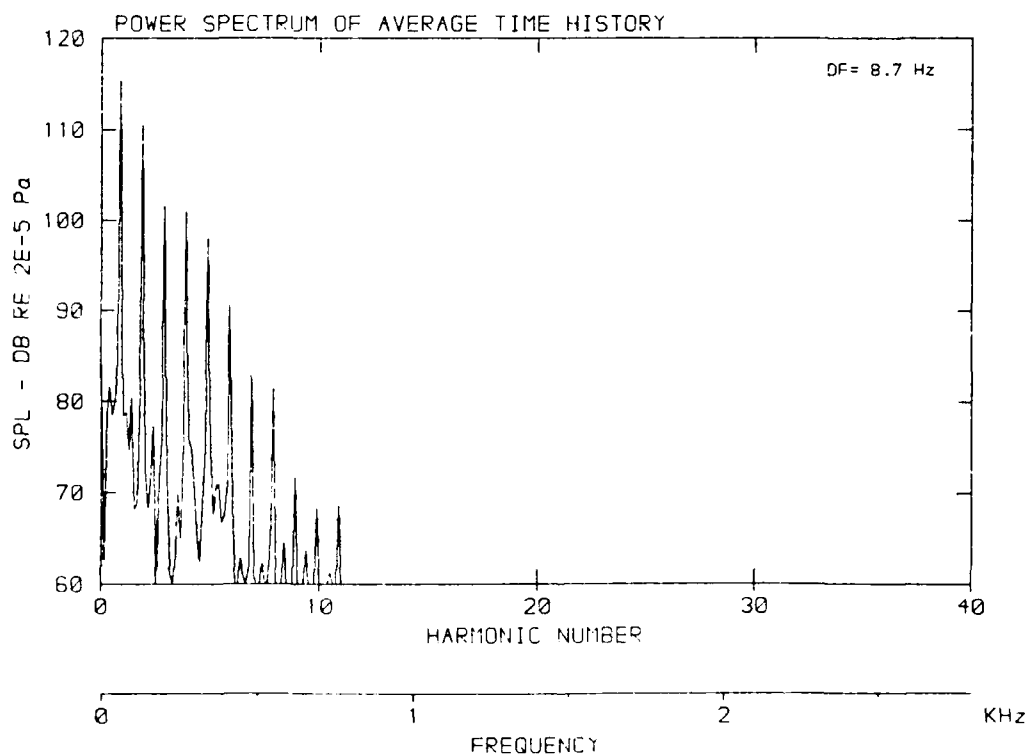
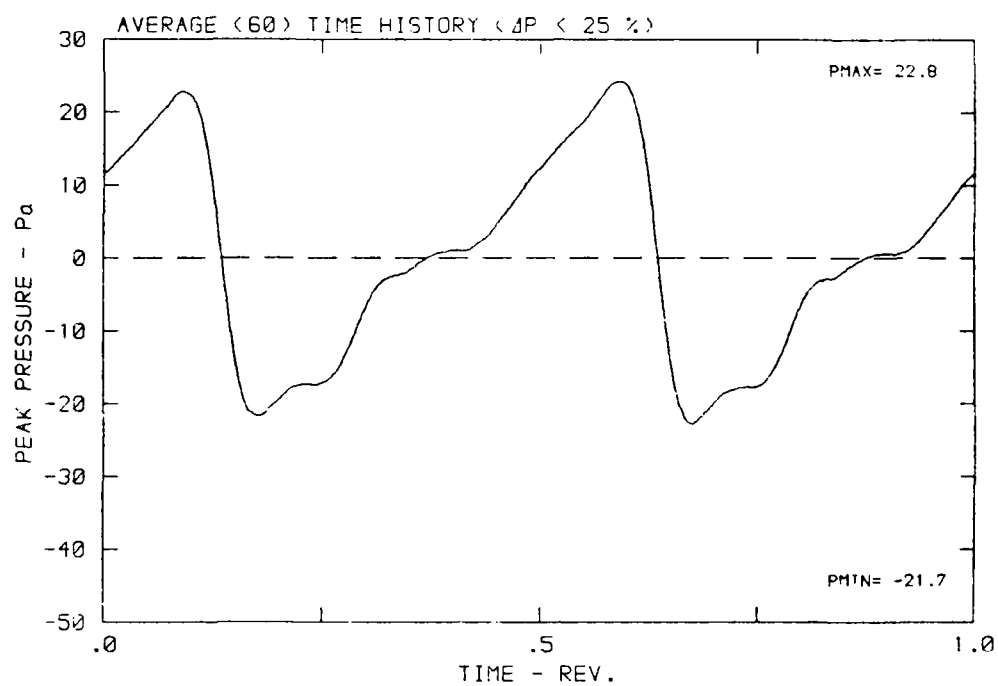
DATA POINT: EN-5 RUN: 161 MP: 5

β : 23.7° MH: .6755 n: 2100 rpm v/u : .231 ϕ : 7.3° T: 286.7 K



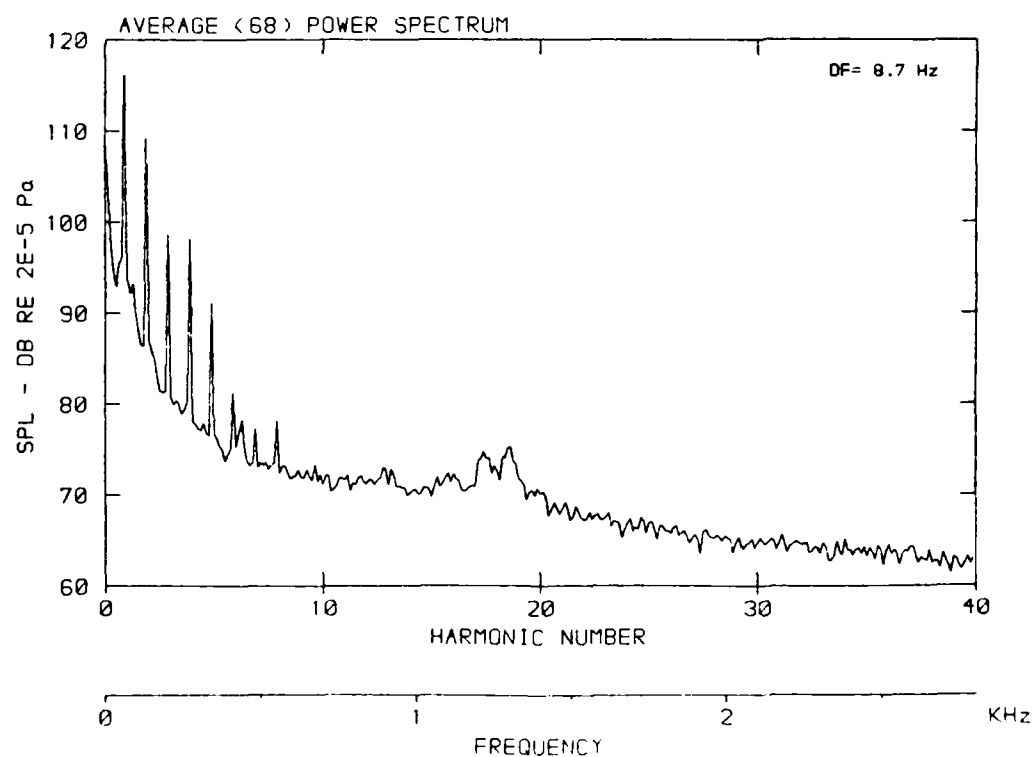
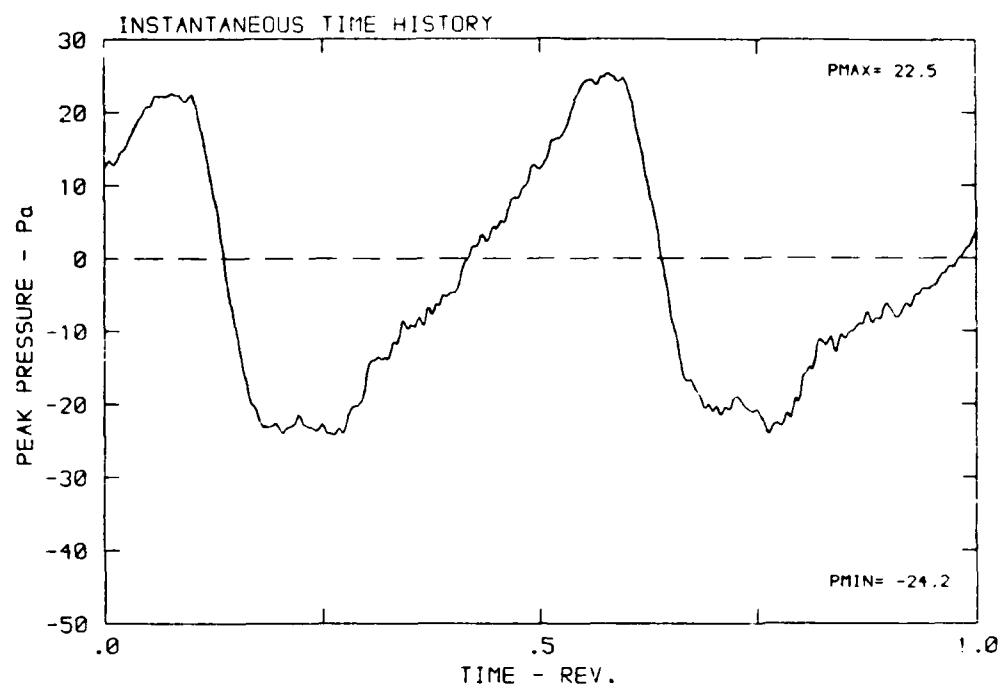
DATA POINT: EN-5 RUN: 161 MP: 5

β : 23.7° MH: .6755 n: 2100 rpm v/u : .231 ϕ : 7.3° T: 286.7 K



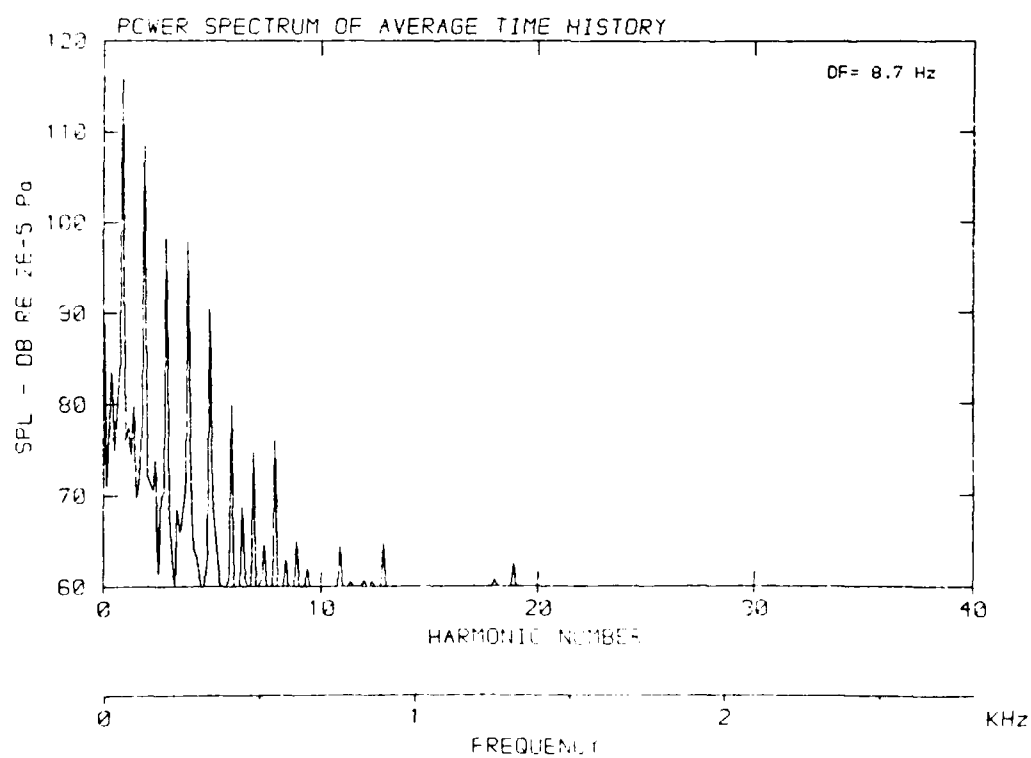
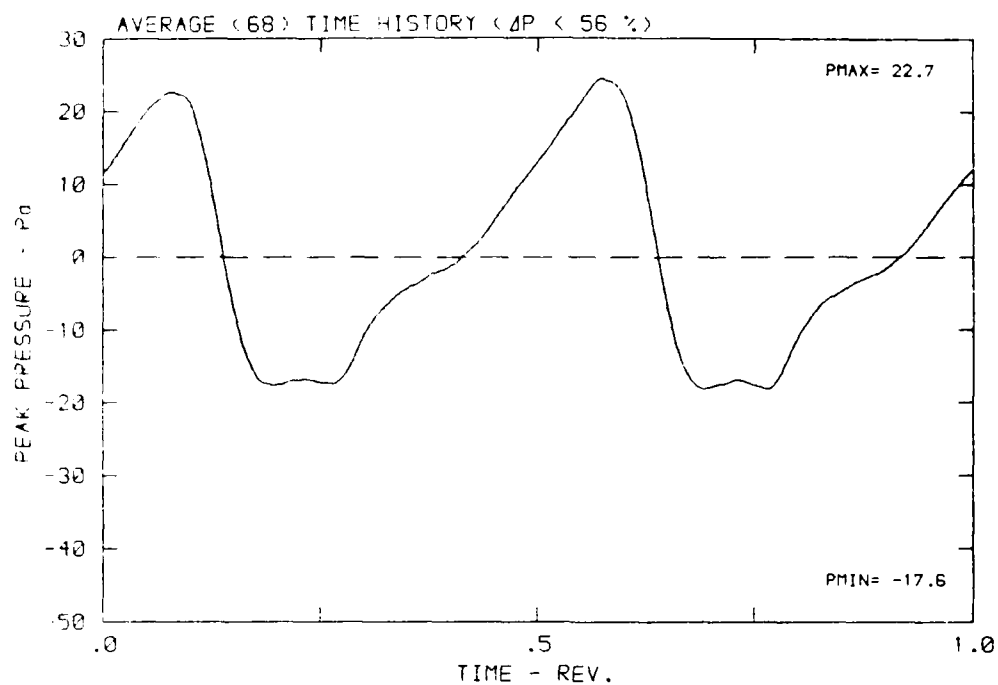
DATA POINT: EN-5 RUN: 161 MF: 6

β : 23.7° MH: .6755 n: 2100 rpm v/u: .231 ϕ : 7.3° T: 285.7 K



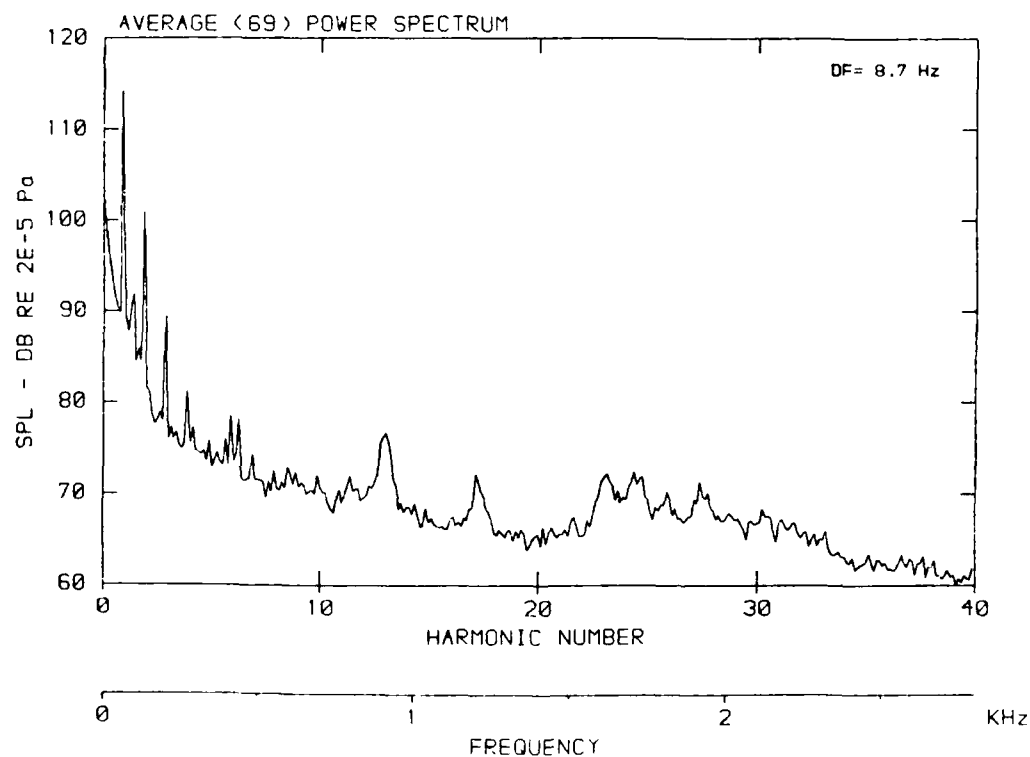
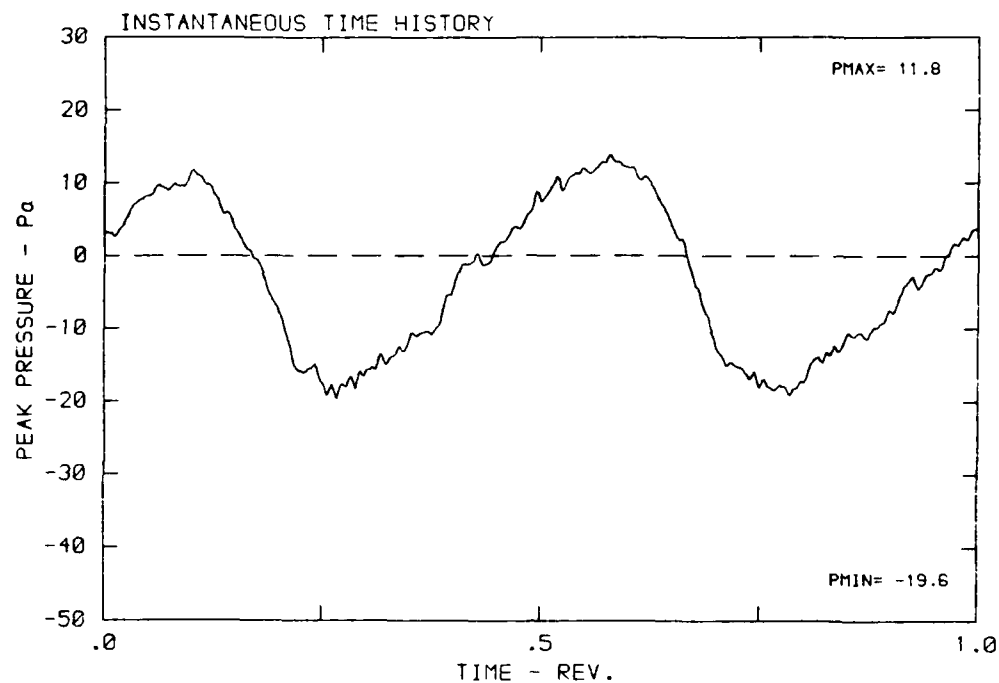
DATA POINT: EN-5 RUN: 161 MP: 6

β : 23.7° MH: .6755 n: 2100 rpm v/u: .231 ϕ : 7.3° T: 286.7 K



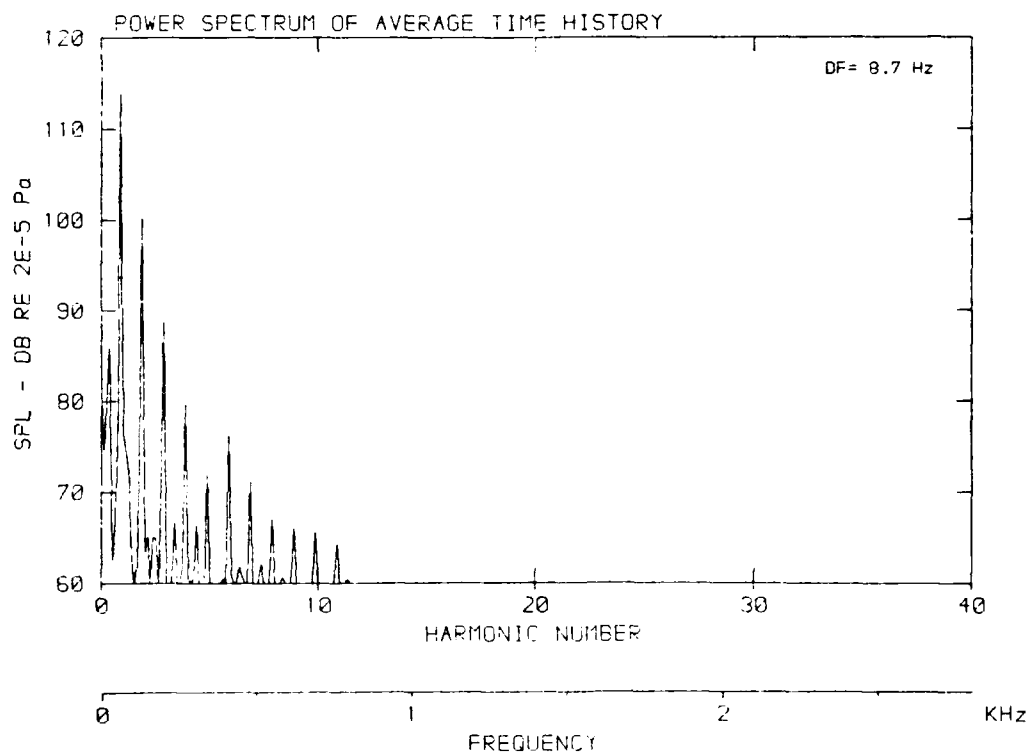
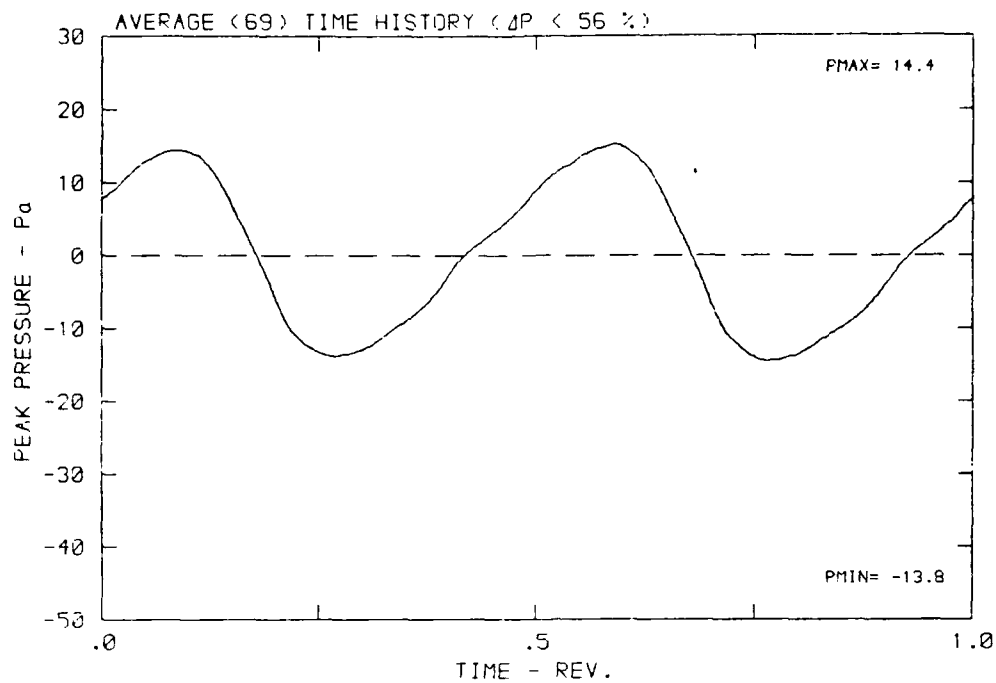
DATA POINT: EN-5 RUN: 161 MP: 7

β : 23.7° MH: .6755 n: 2100 rpm v/u: .231 ϕ : 7.3° T: 286.7 K



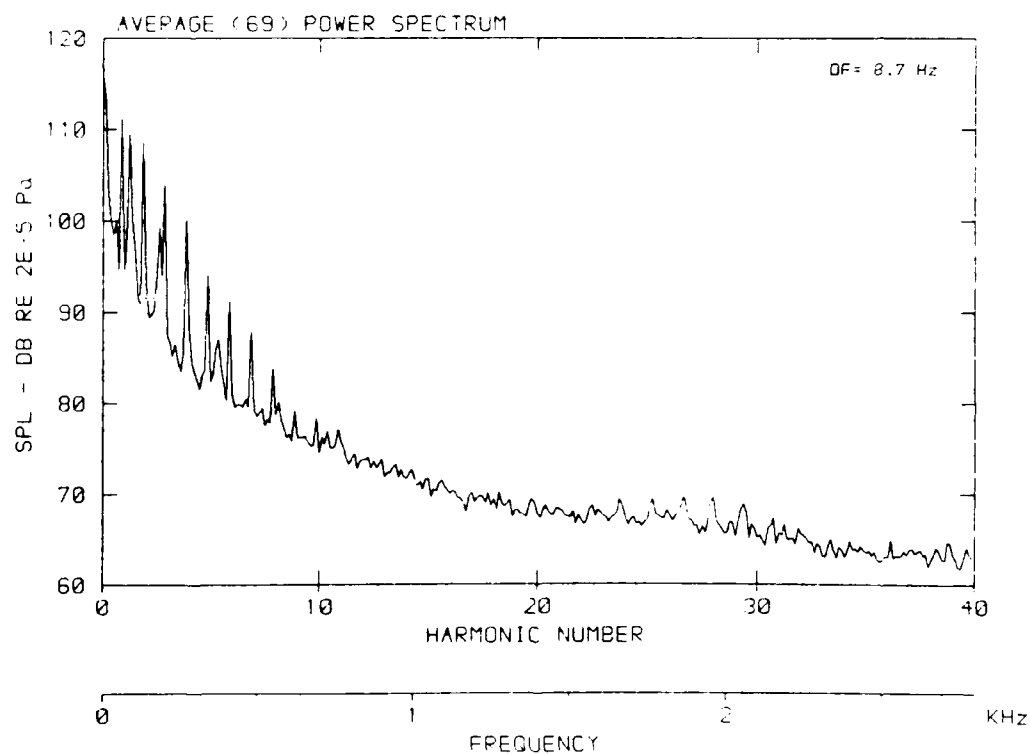
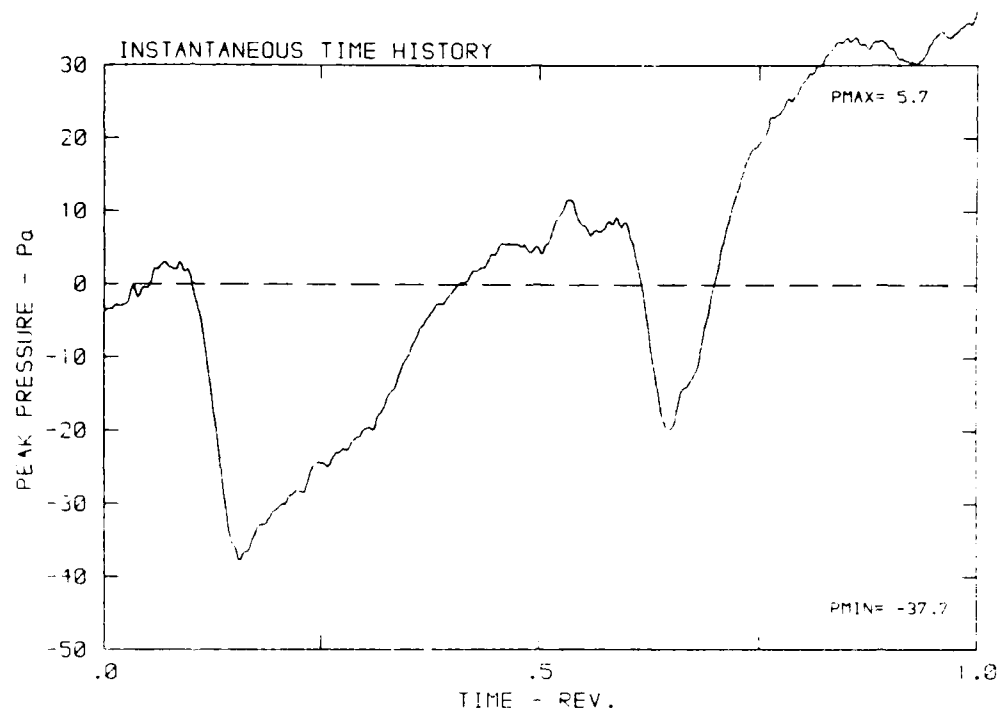
DATA POINT: EN-5 RUN: 161 MP: 7

β : 23.7° MH: .6755 n: 2100 rpm v/u : .231 ϕ : 7.3° T: 286.7 K



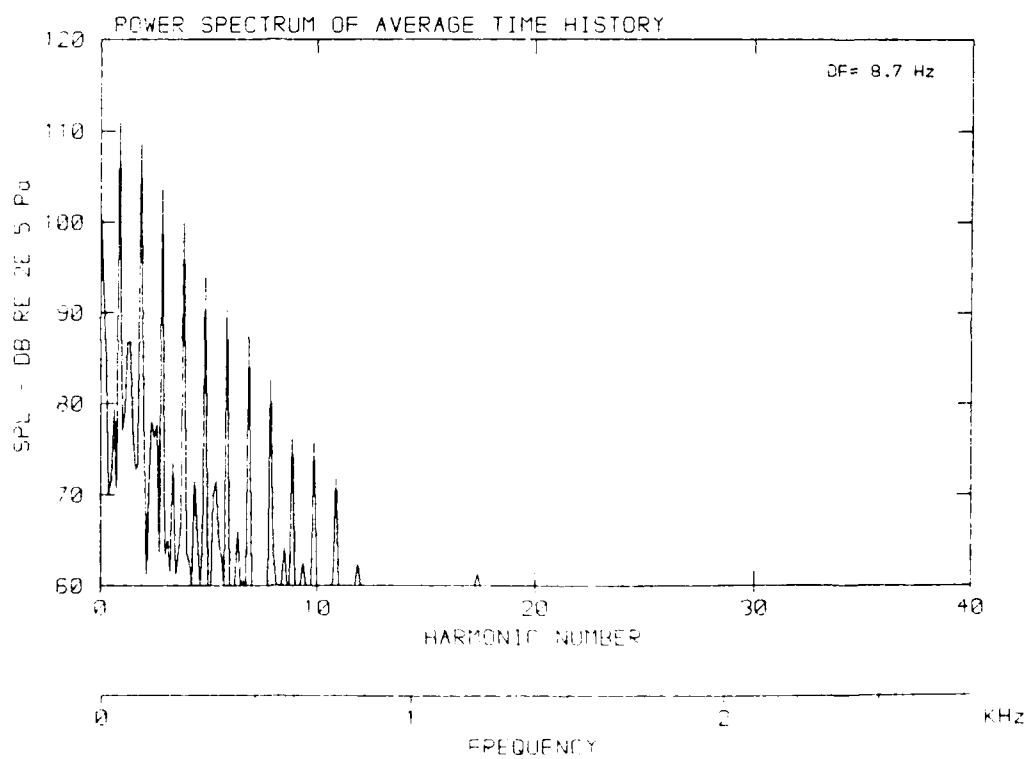
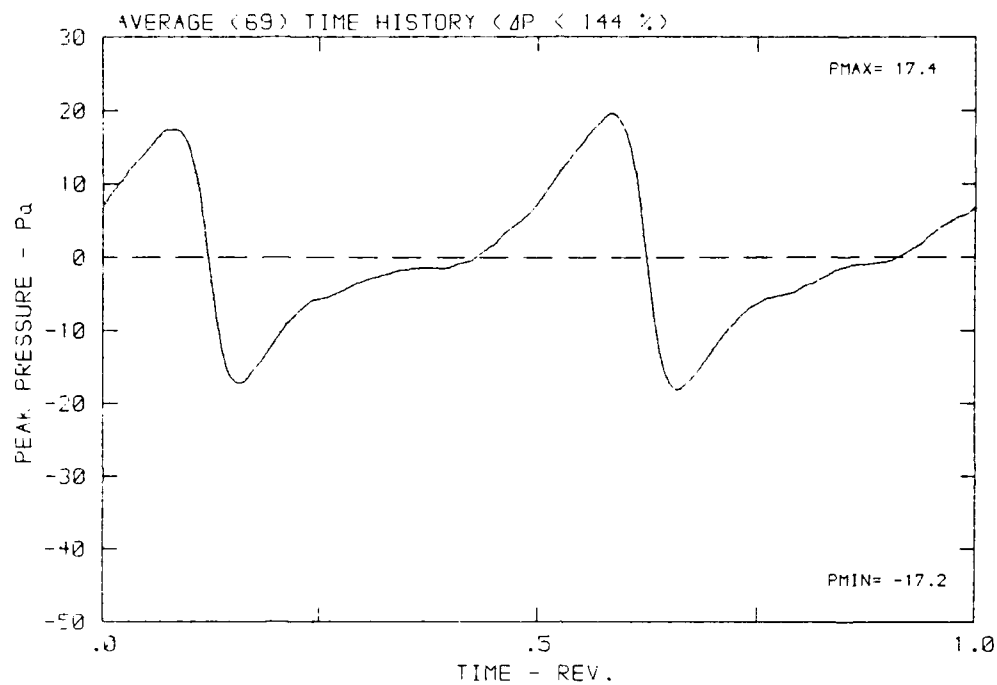
DATA POINT: EN-5 RUN: 161 MP: 8

β : 23.7° MH: .6755 n: 2100 rpm v/u : .231 ϕ : 7.3° T: 286.7 K



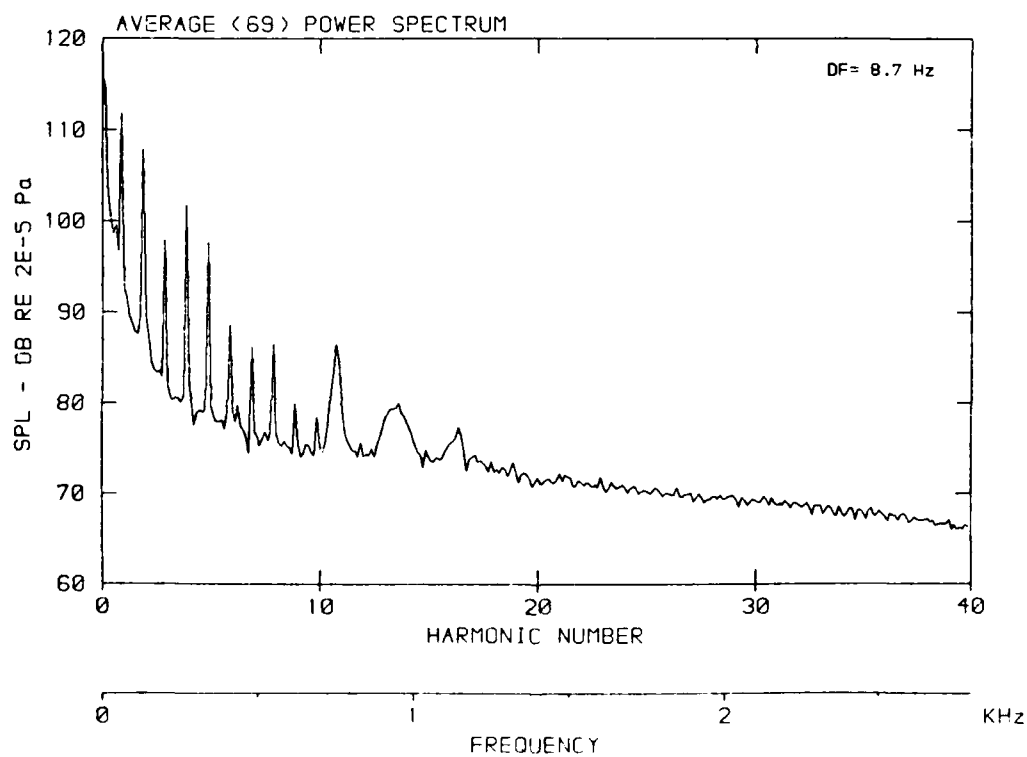
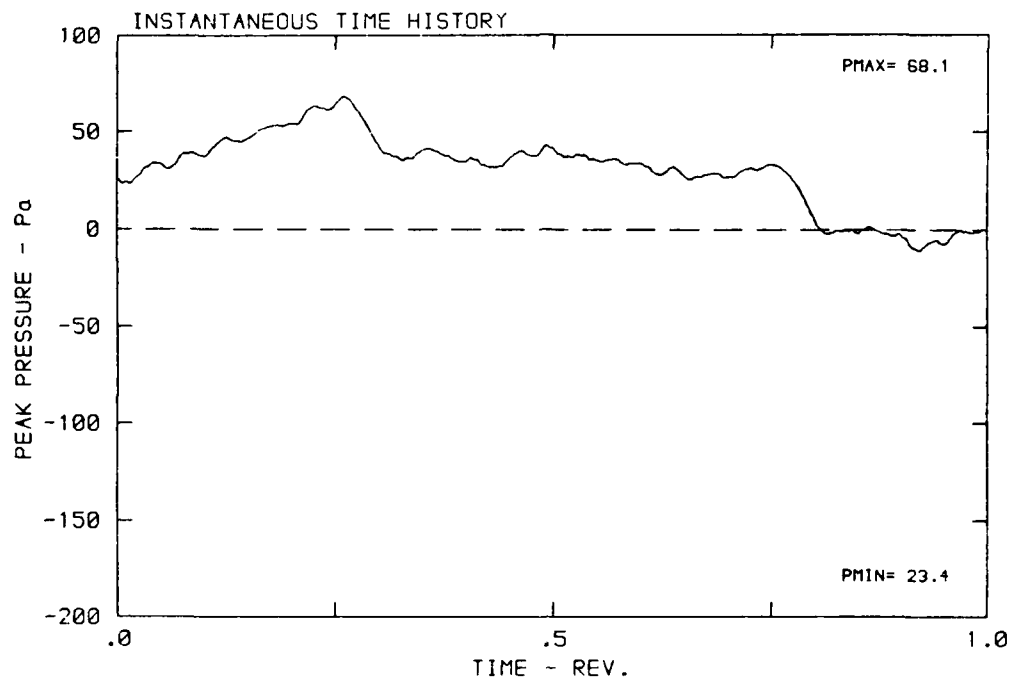
DATA POINT: EN-5 RUN: 161 MP: 8

β : 23.7° MH: .6755 n: 2100 rpm v/u : .231 ϕ : 7.3° T: 286.7 K



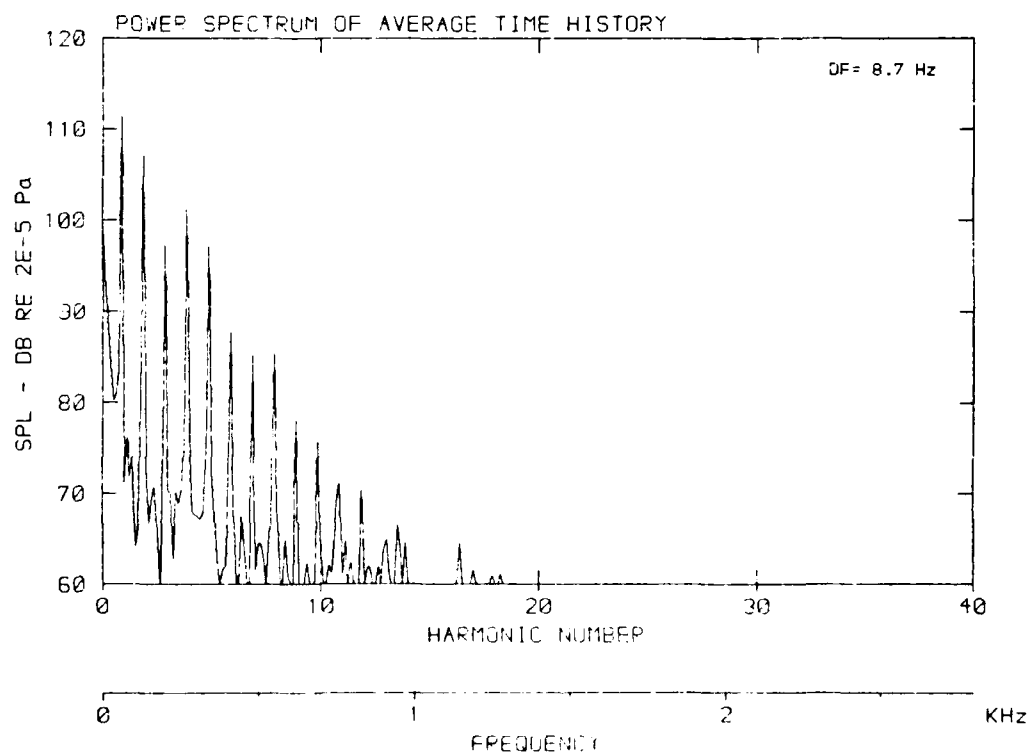
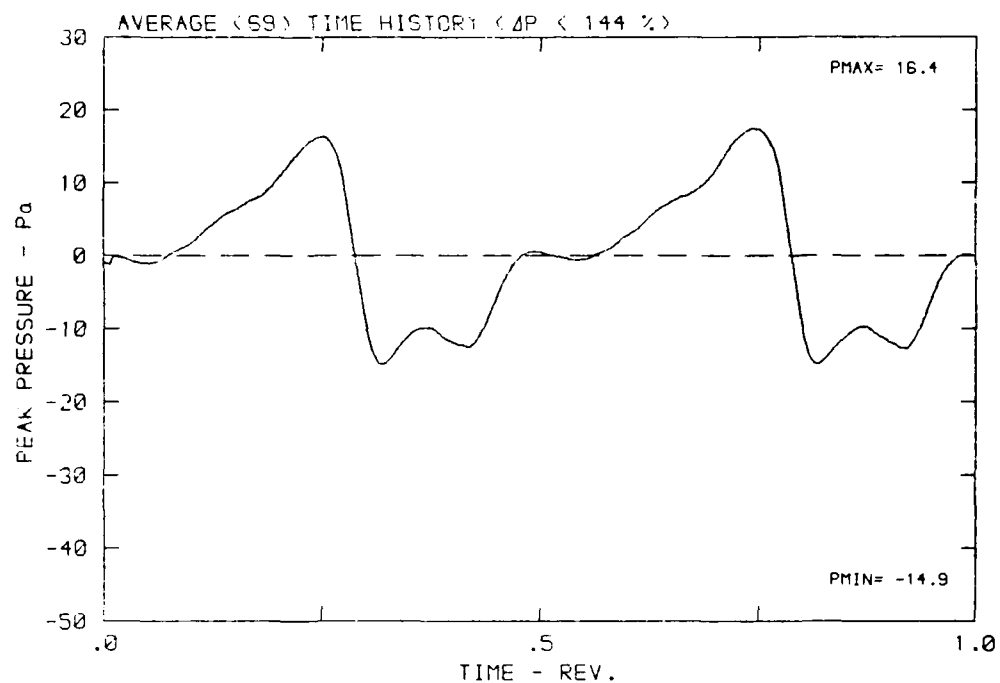
DATA POINT: EN-5 RUN: 161 MP: 9

β : 23.7° MH: .6755 n: 2100 rpm v/u: .231 ϕ : 7.3° T: 286.7 K



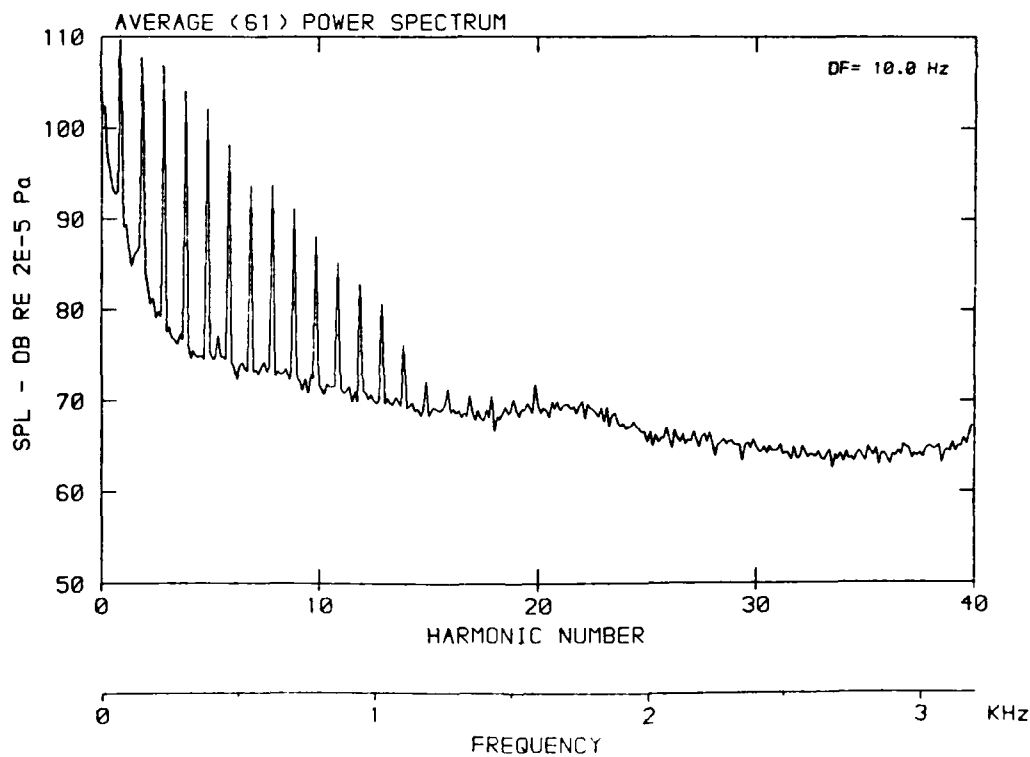
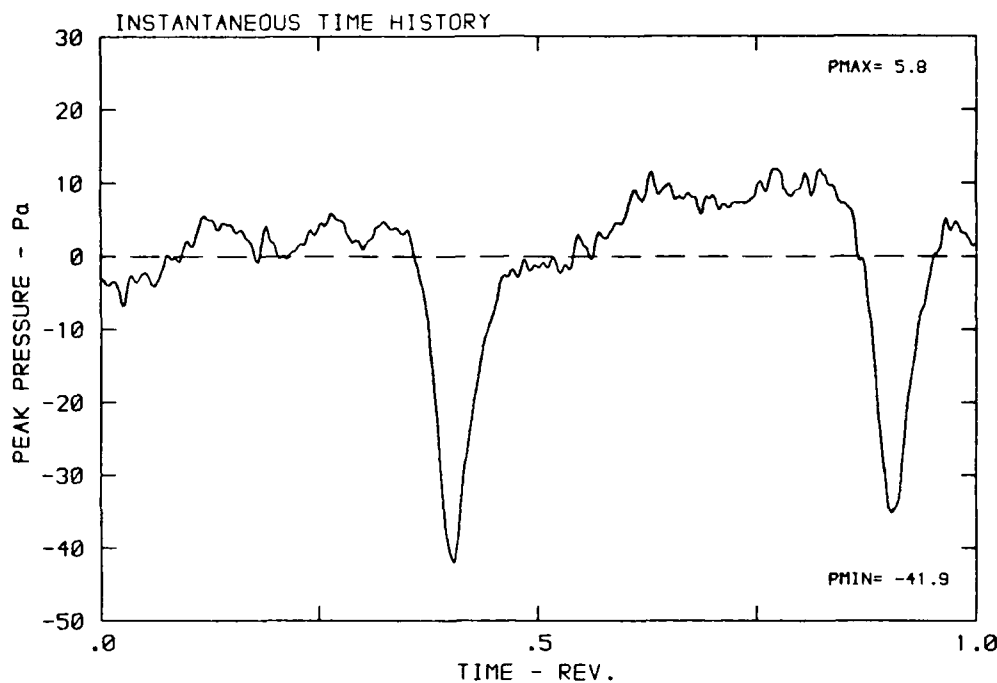
DATA POINT: EN-5 RUN: 161 MP: 9

β : 23.7° MH: .6755 n: 2100 rpm v/u : .231 ϕ : 7.3° T: 286.7 K



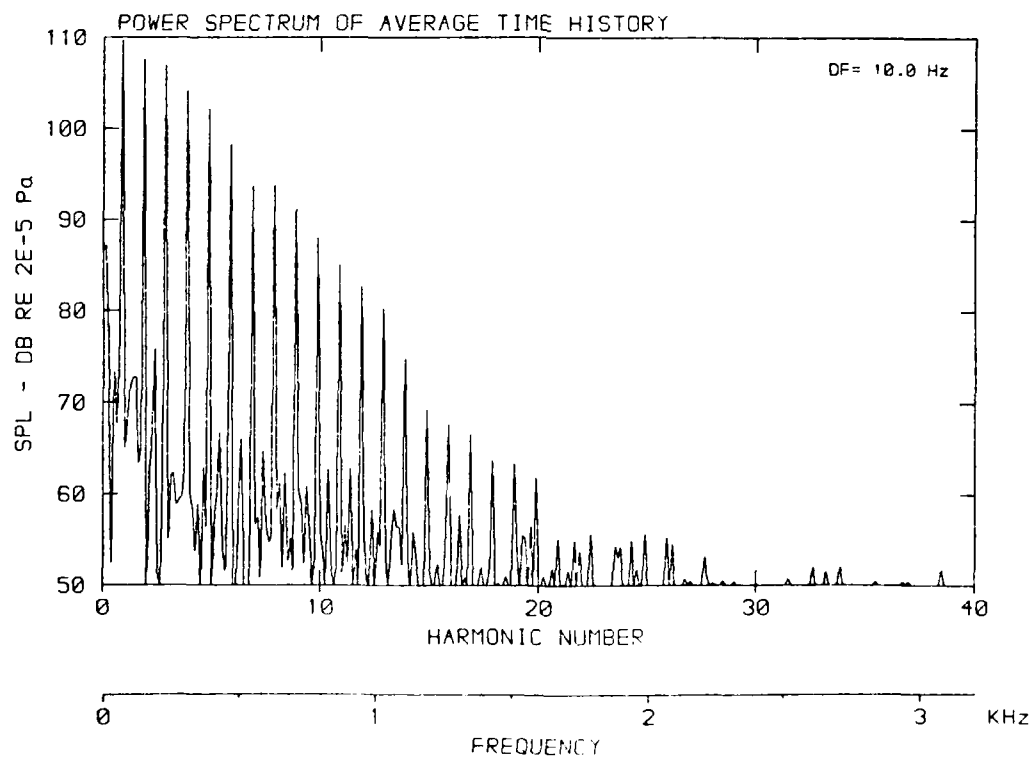
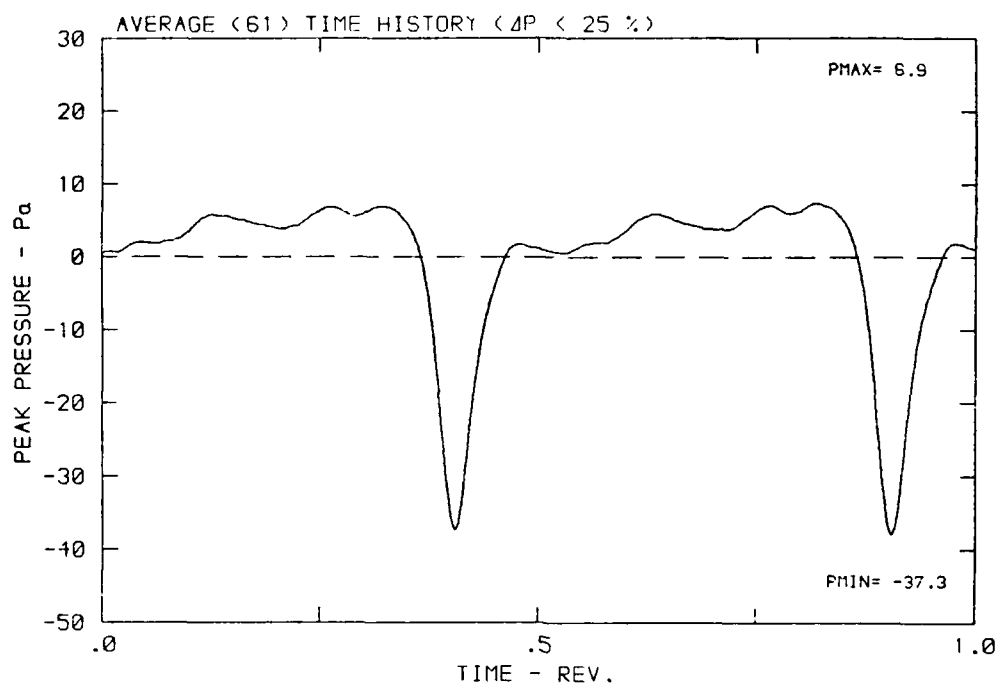
DATA POINT: EN-6 RUN: 162 MP: 1

β : 23.7° MH: .7773 n: 2400 rpm v/u: .263 ϕ : 7.3° T: 287.1 K



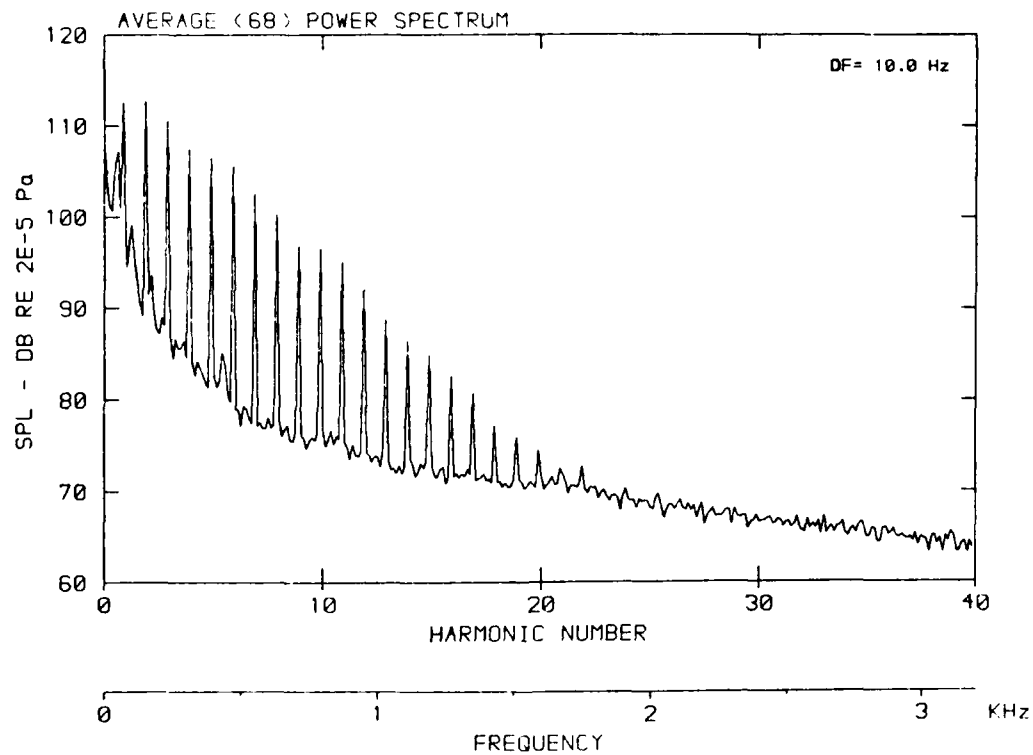
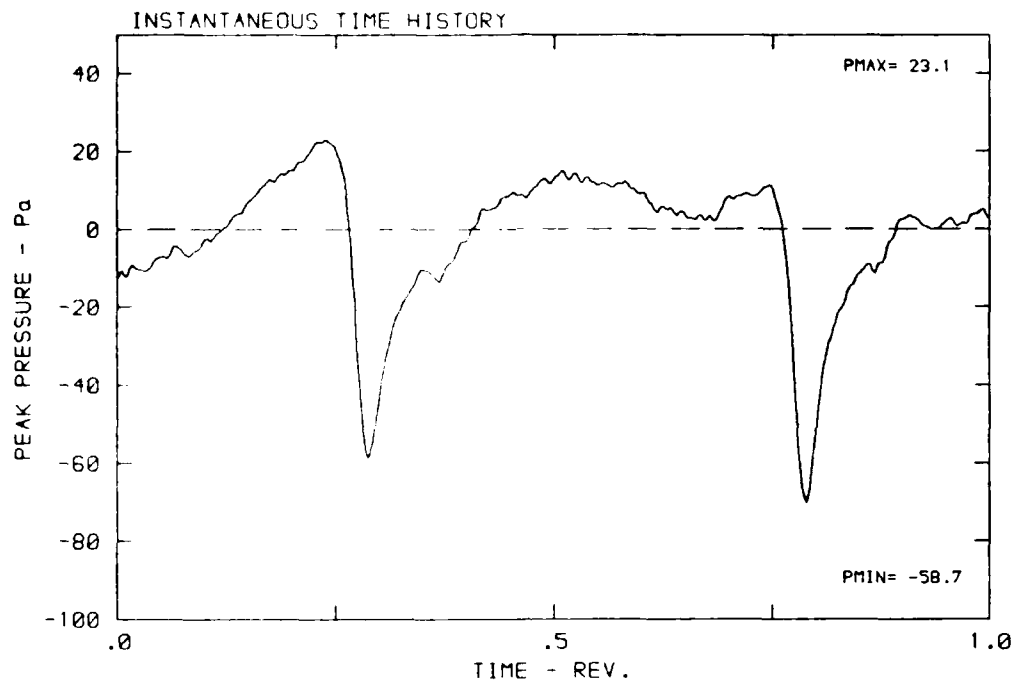
DATA POINT: EN-6 RUN: 162 MP: 1

β : 23.7° MH: .7773 n: 2400 rpm v/u: .263 ϕ : 7.3° T: 287.1 K



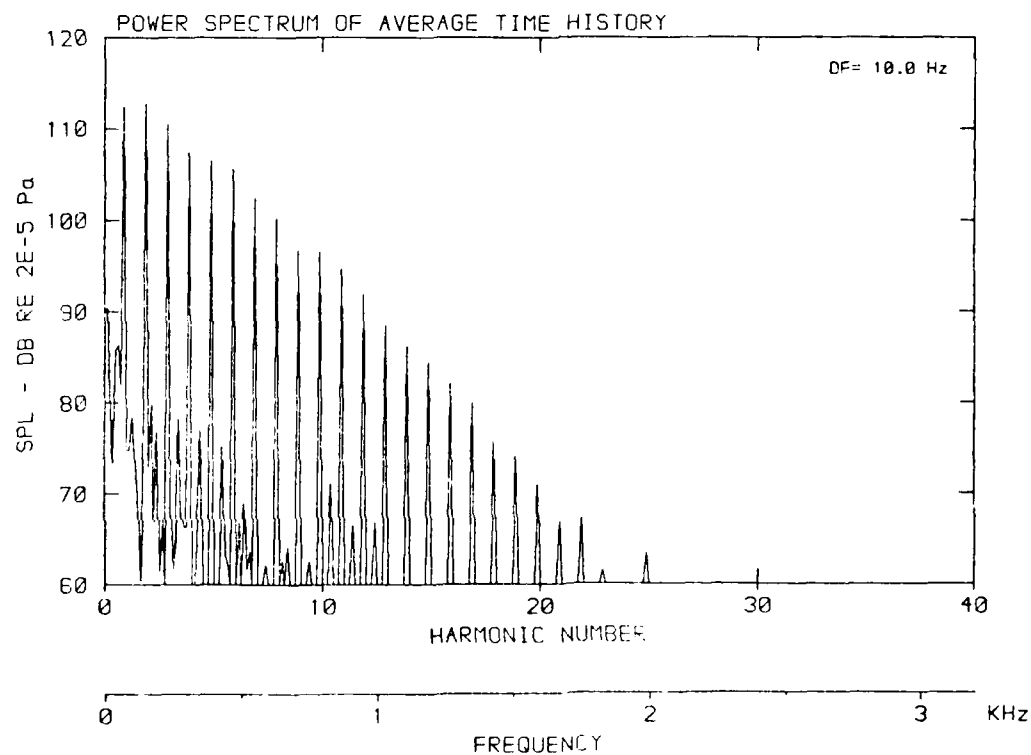
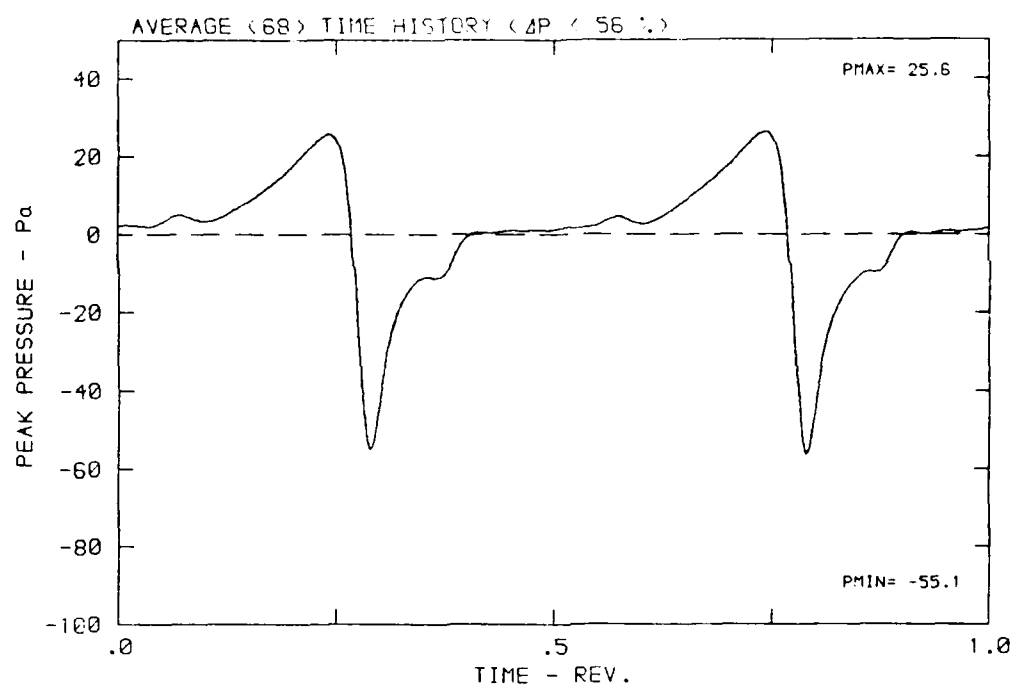
DATA POINT: EN-6 RUN: 162 MP: 2

β : 23.7° MH: .7773 n: 2400 rpm v/u: .263 ϕ : 7.3° T: 287.1 K



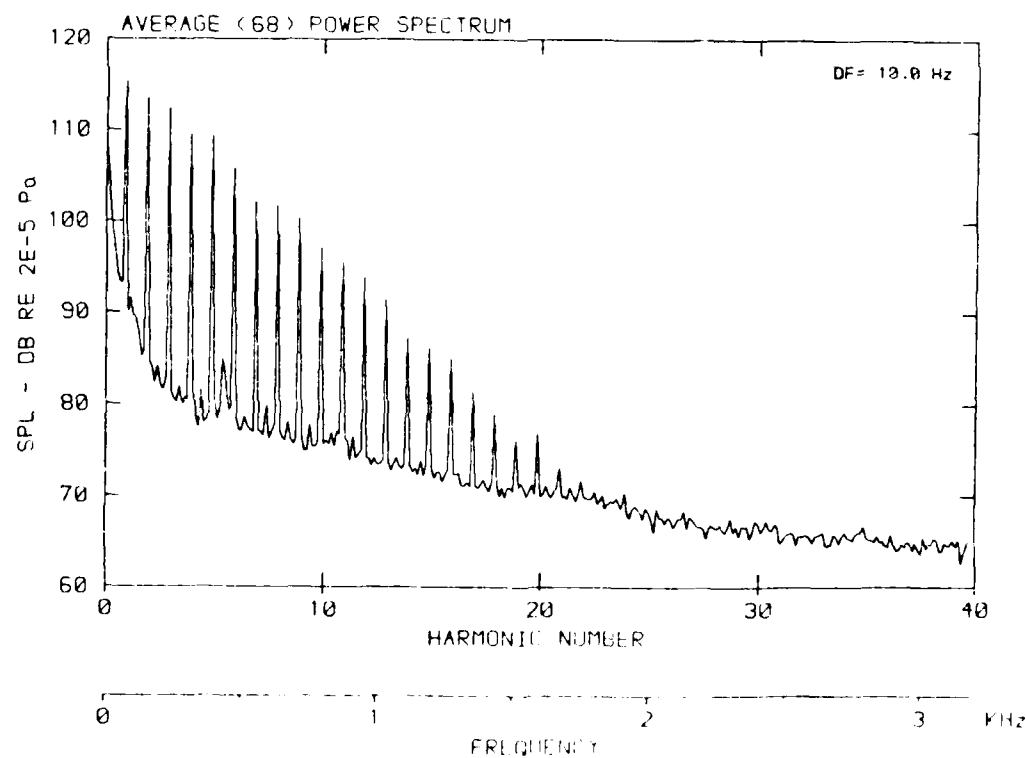
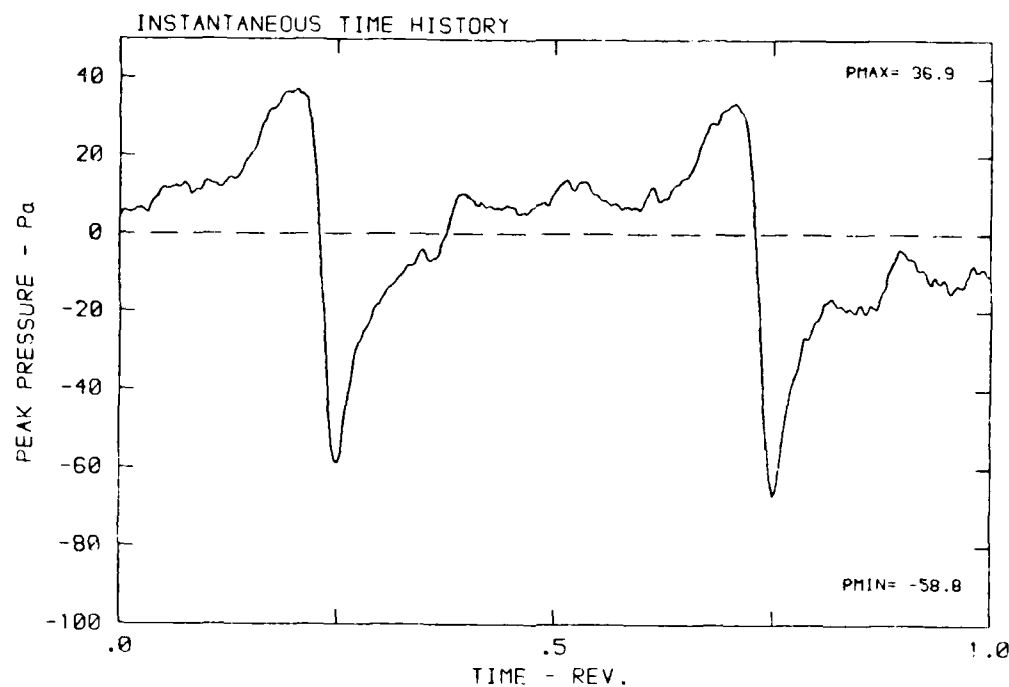
DATA POINT: EN-6 PUN: 162 MP: 2

β : 23.7° MH: .7773 n: 2400 rpm v/u : .263 ϕ : 7.3° T: 287.1 K



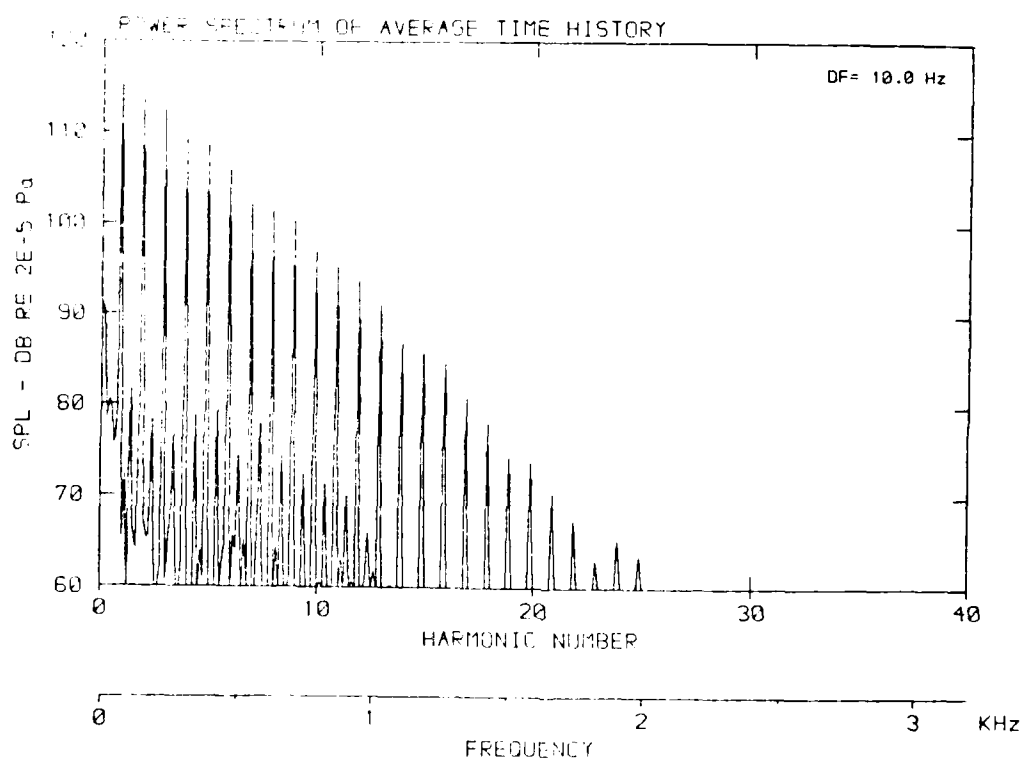
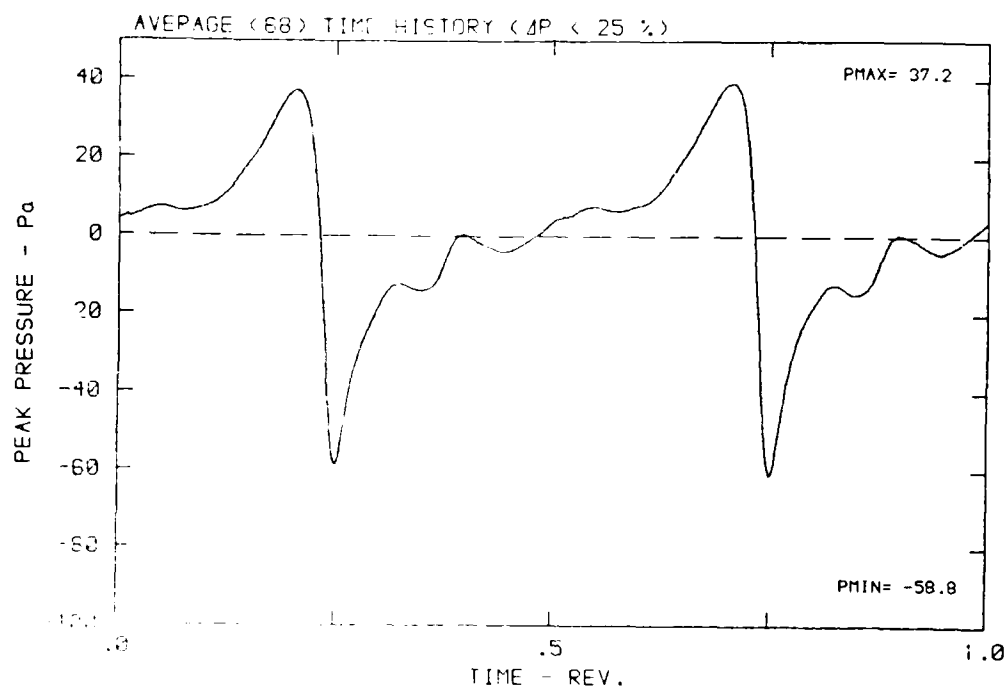
DATA POINT: EN-6 RUN: 162 MP: 3

β : 23.7° MH: .7773 n: 2400 rpm v/u : .263 ϕ : 7.3° T: 287.1 K



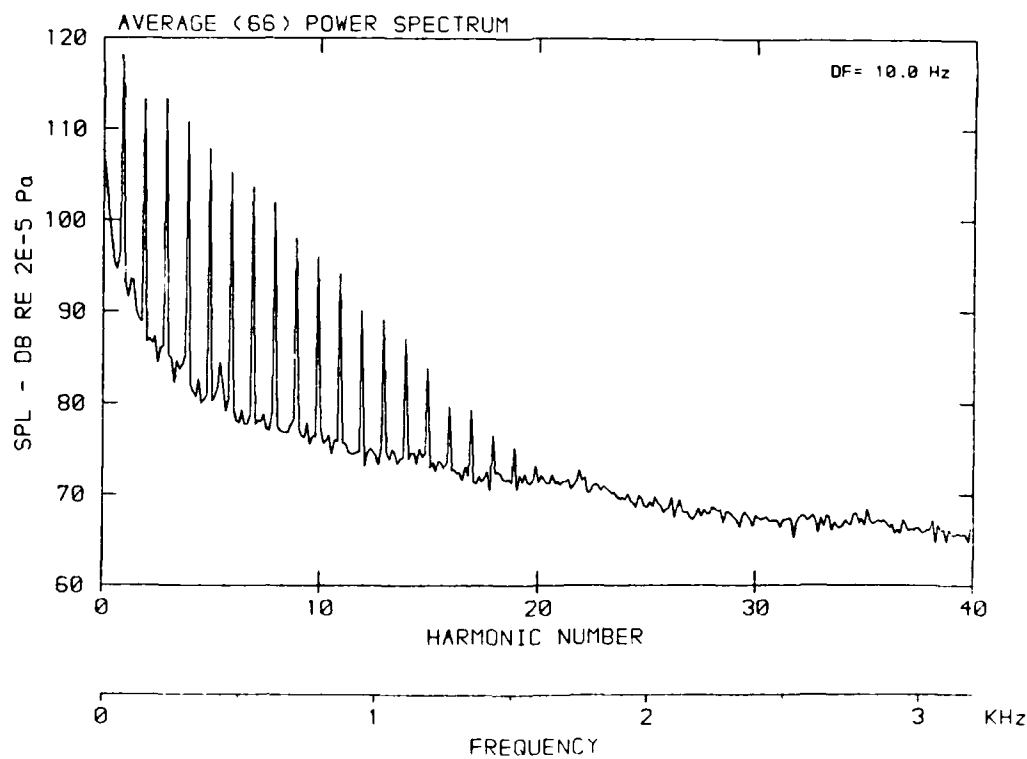
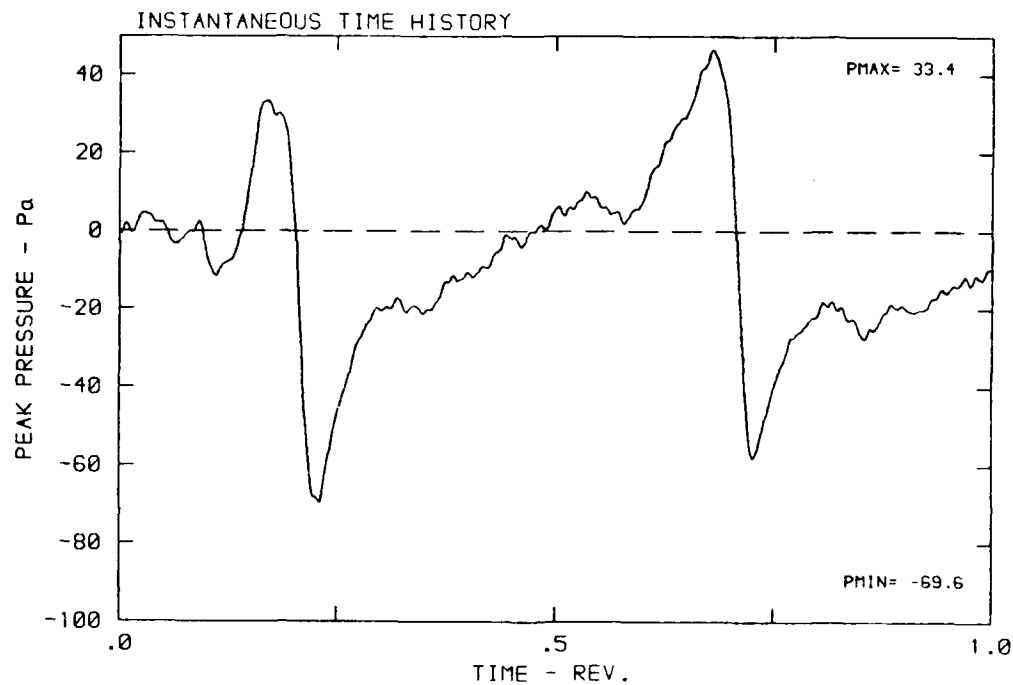
DATA POINT: EN-6 RUN: 162 MP: 3

β : 23.7° MH: .7773 n: 2400 rpm v/u : .263 ϕ : 7.3° T: 287.1 K



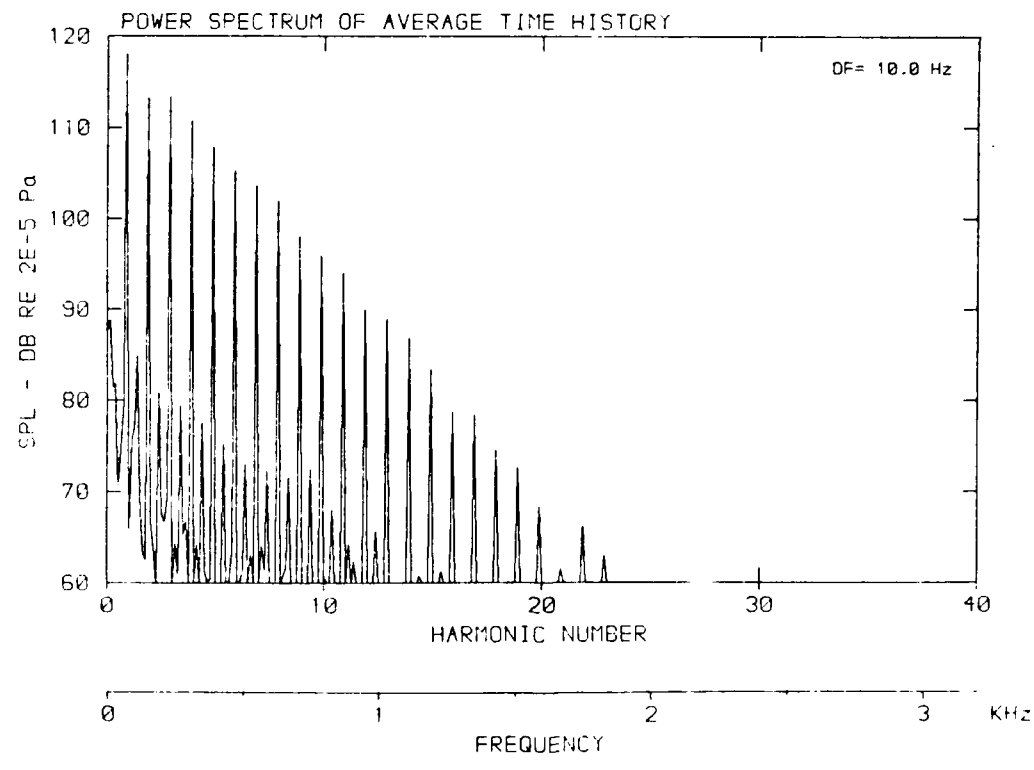
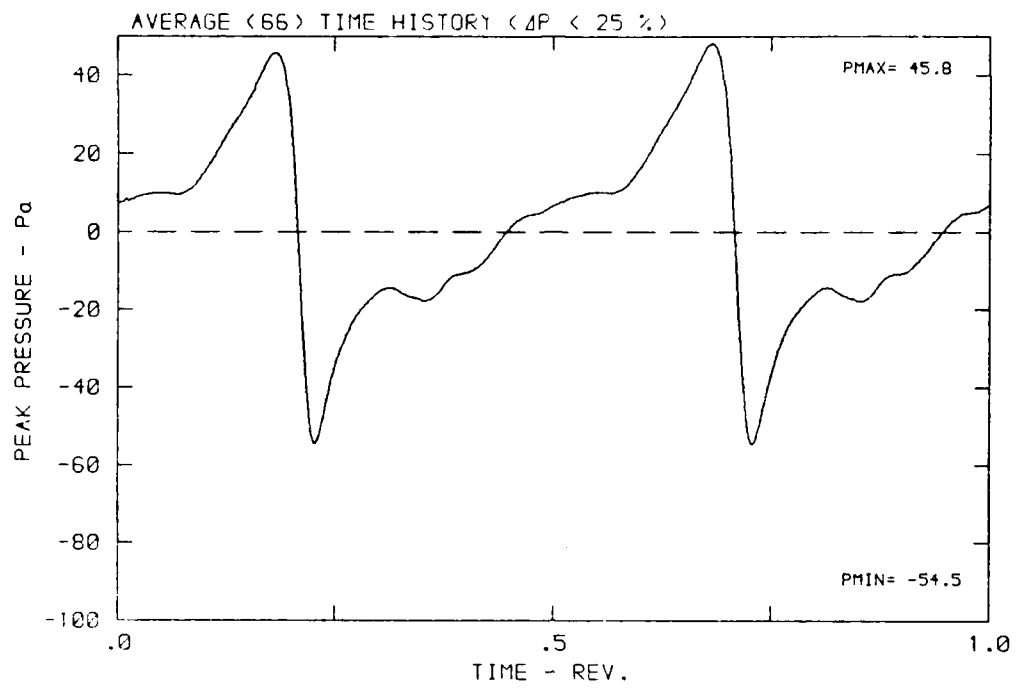
DATA POINT: EN-6 RUN: 162 MP: 4

β : 23.7° MH: .7773 n: 2400 rpm v/u : .263 ϕ : 7.3° T: 287.1 K



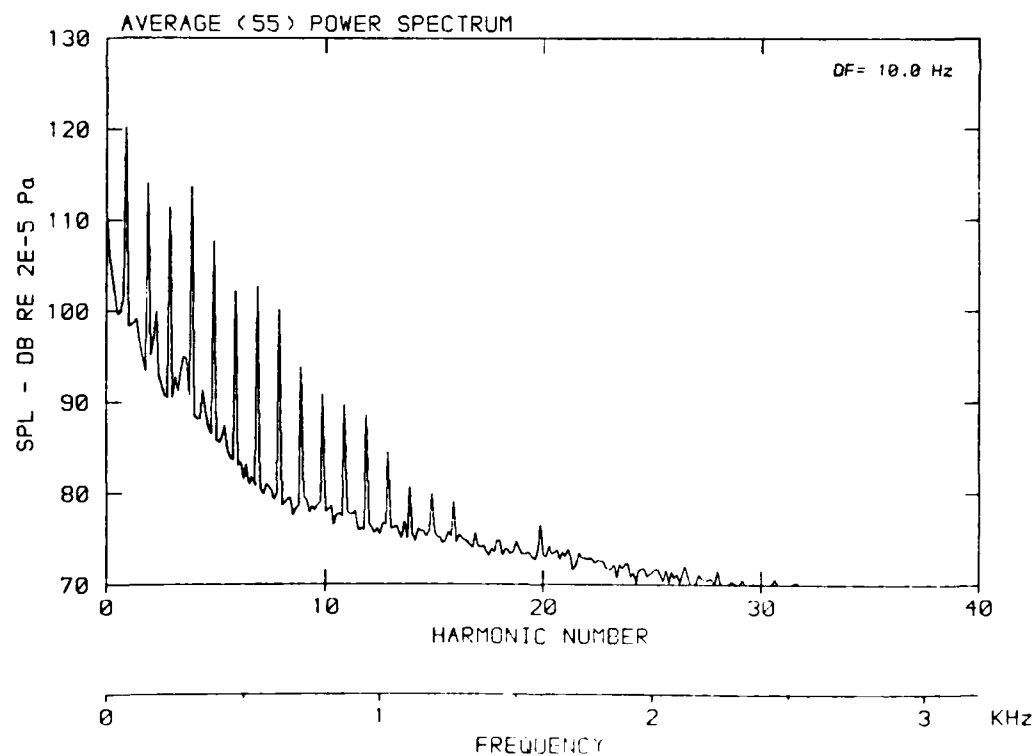
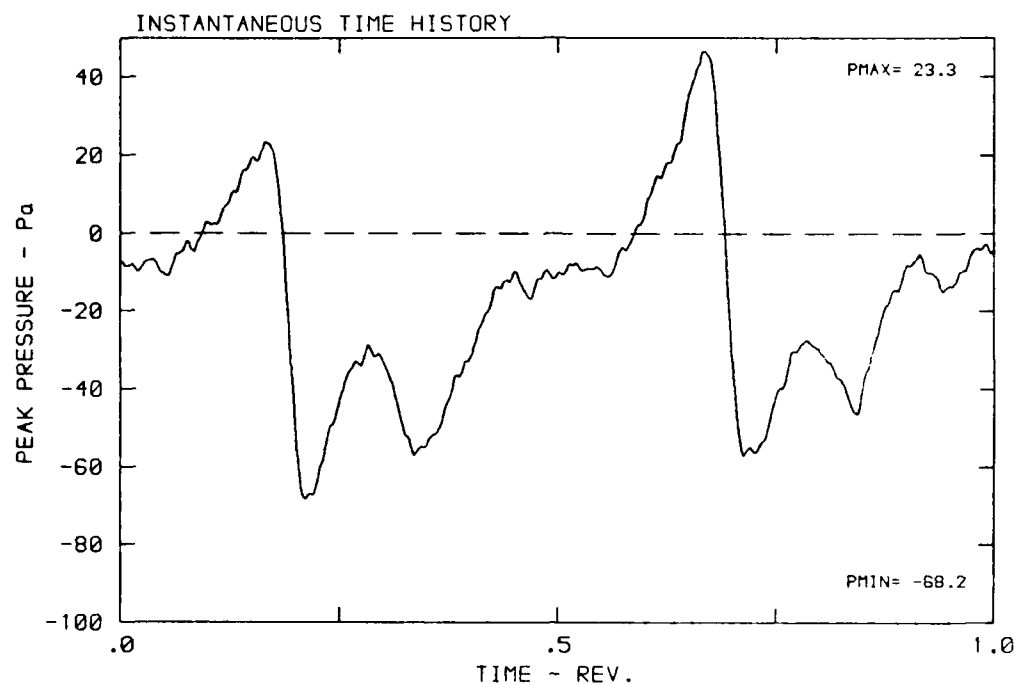
DATA POINT: EN-6 RUN: 162 MP: 4

β : 23.7° MH: .7773 n: 2400 rpm v/u: .263 ϕ : 7.3° T: 287.1 K



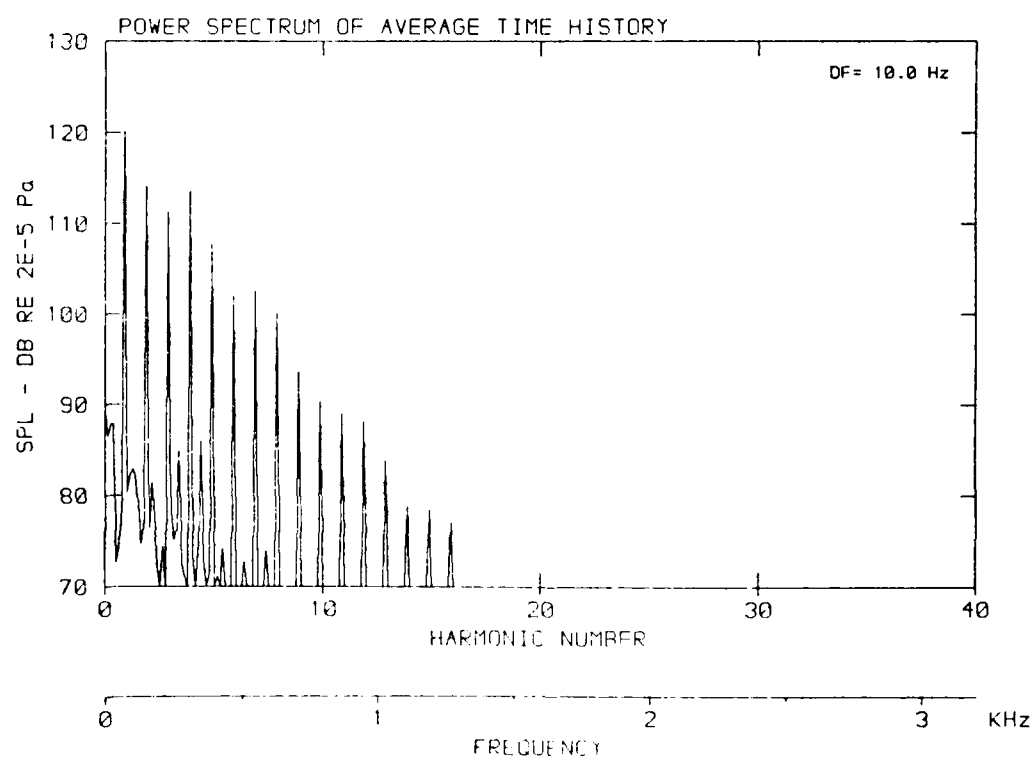
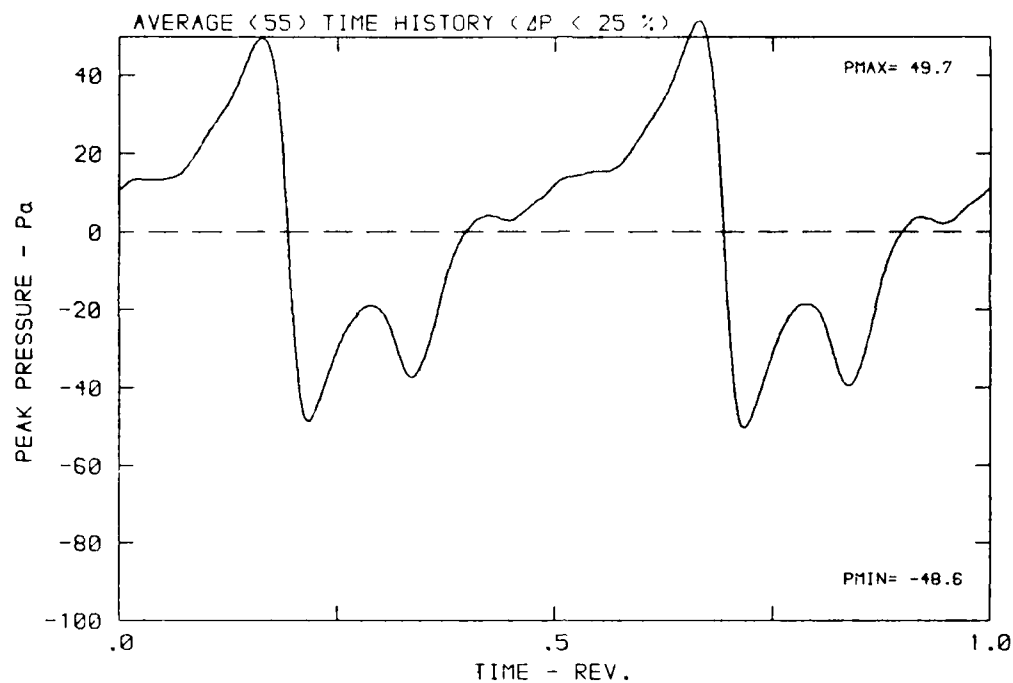
DATA POINT: EN-6 RUN: 162 MP: 5

β : 23.7° MH: .7773 n: 2400 rpm v/u: .263 ϕ : 7.3° T: 287.1 K



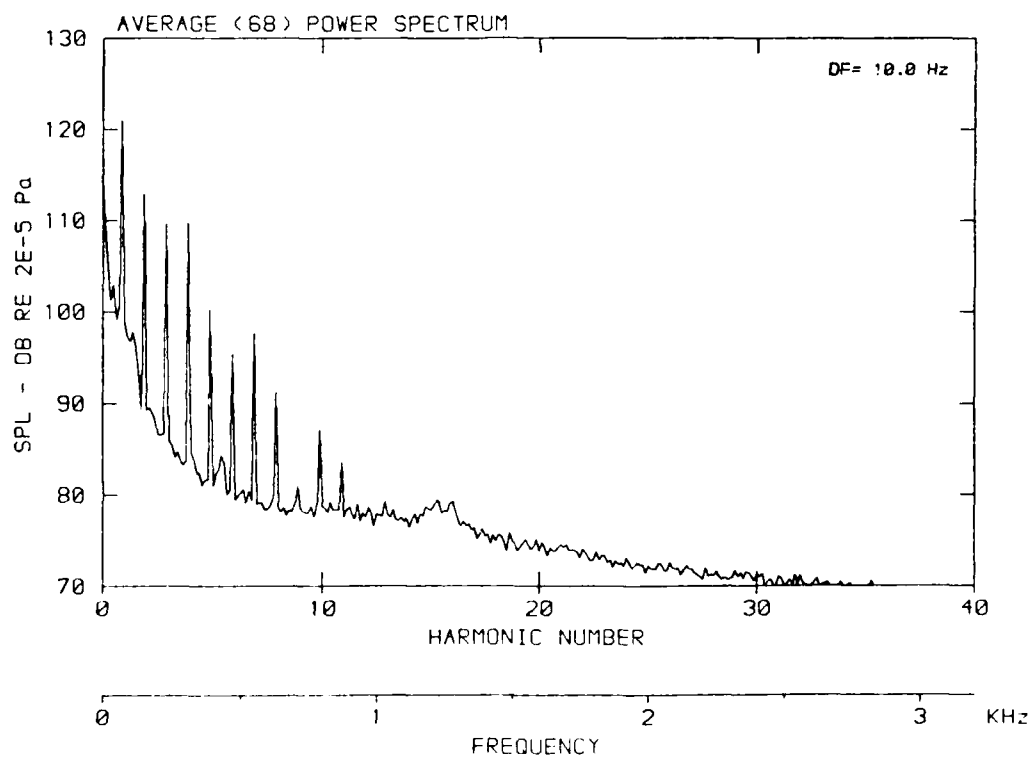
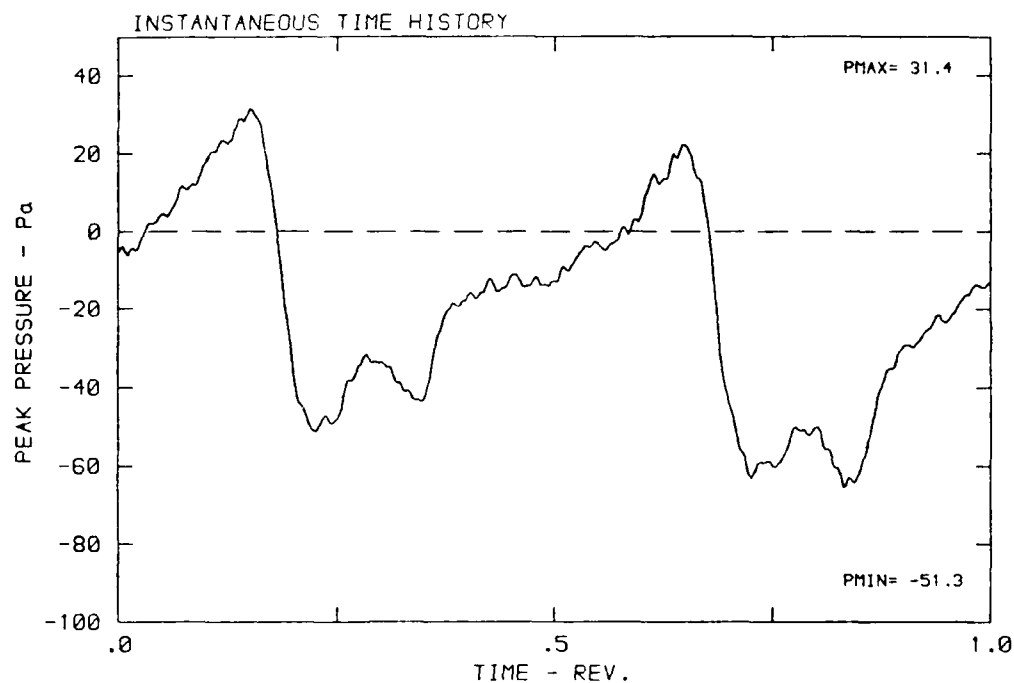
DATA POINT: EN-6 RUN: 162 MP: 5

β : 23.7° MH: .7773 n: 2400 rpm v/u: .263 ϕ : 7.3° T: 287.1 K



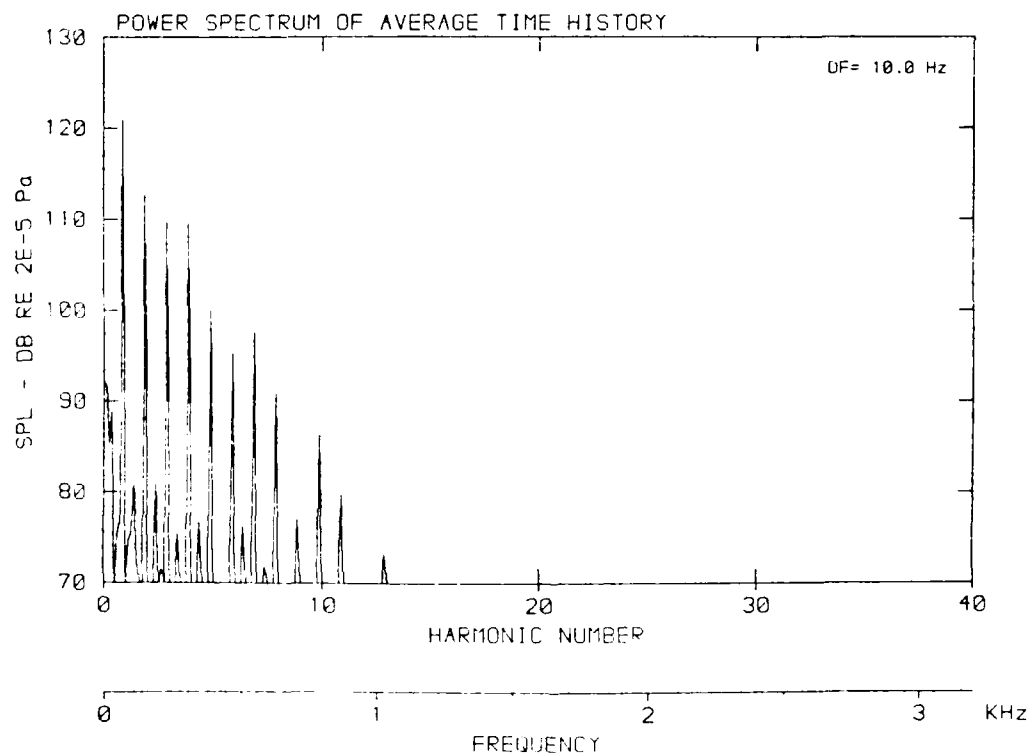
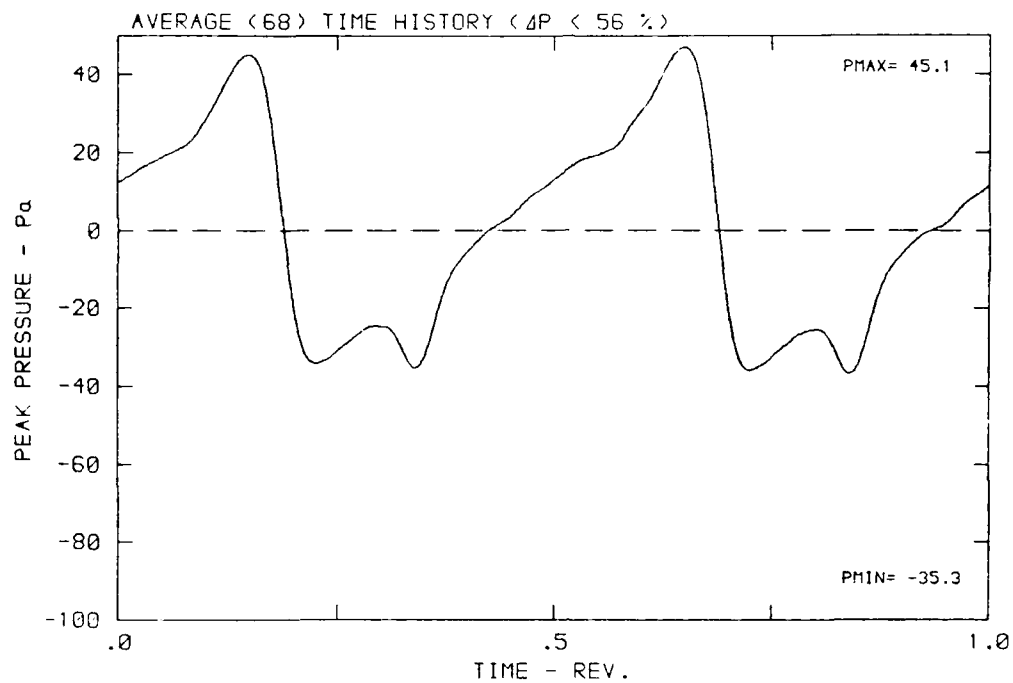
DATA POINT: EN-6 RUN: 162 MP: 6

β : 23.7° MH: .7773 n: 2400 rpm v/u: .263 ϕ : 7.3° T: 287.1 K



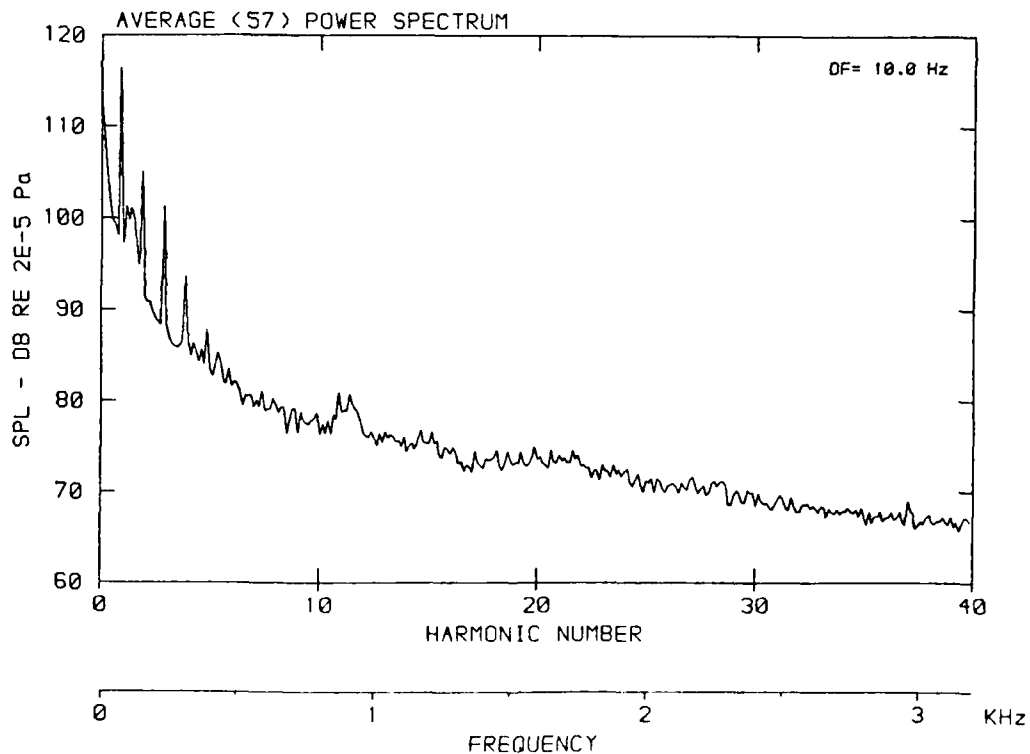
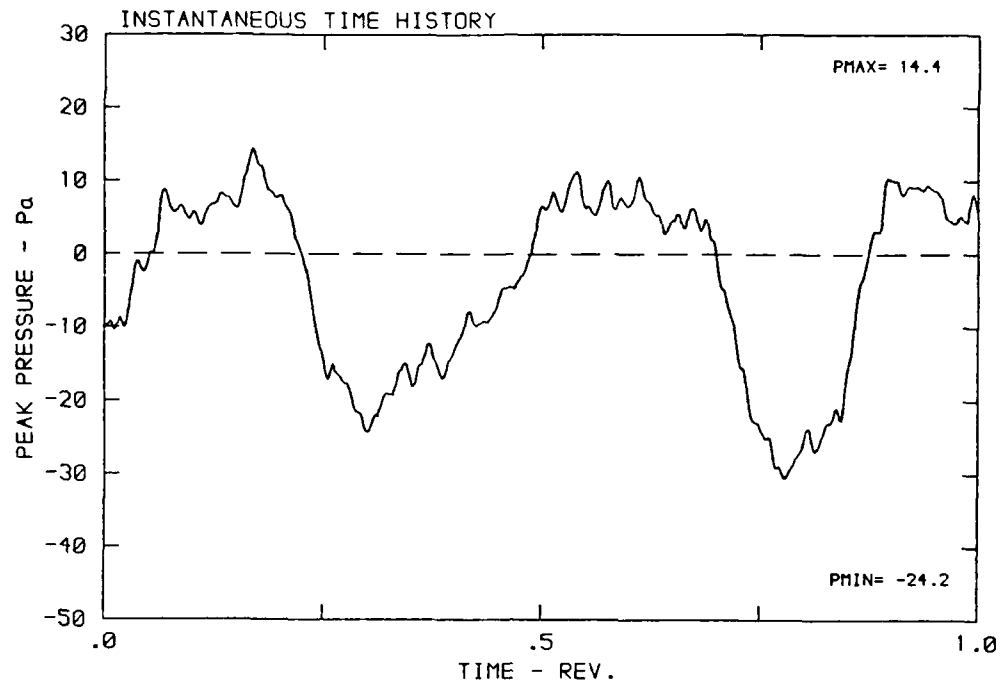
DATA POINT: EN-6 RUN: 162 MP: 6

β : 23.7° MH: .7773 n: 2400 rpm v/u: .263 ϕ : 7.3° T: 287.1 K



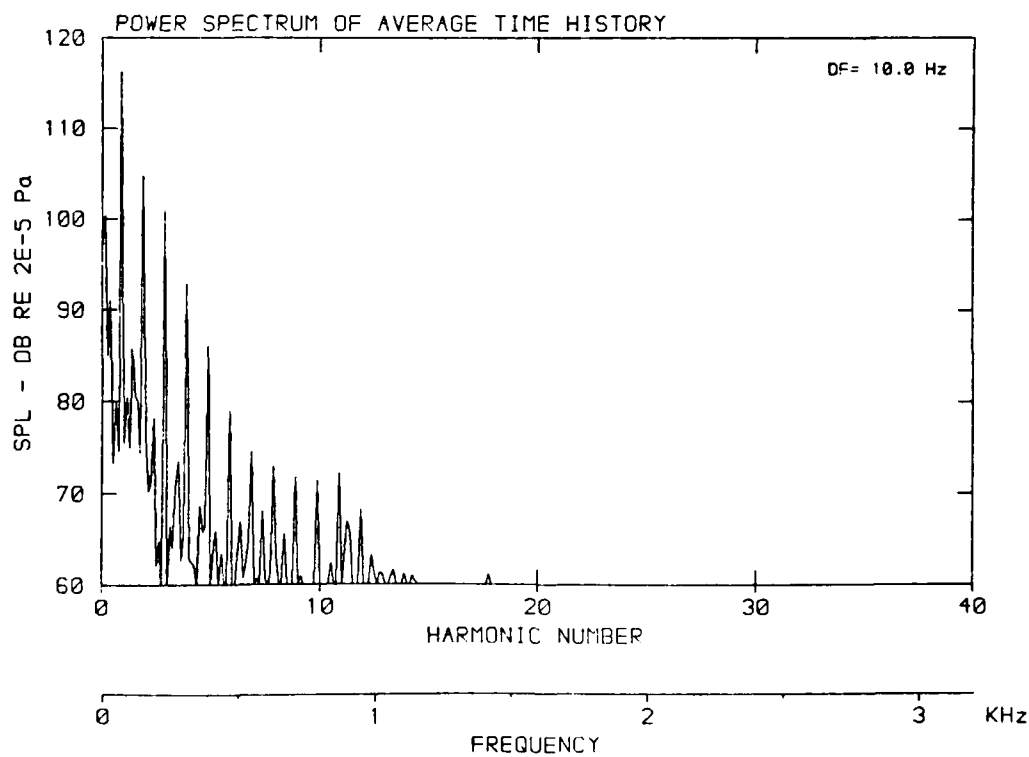
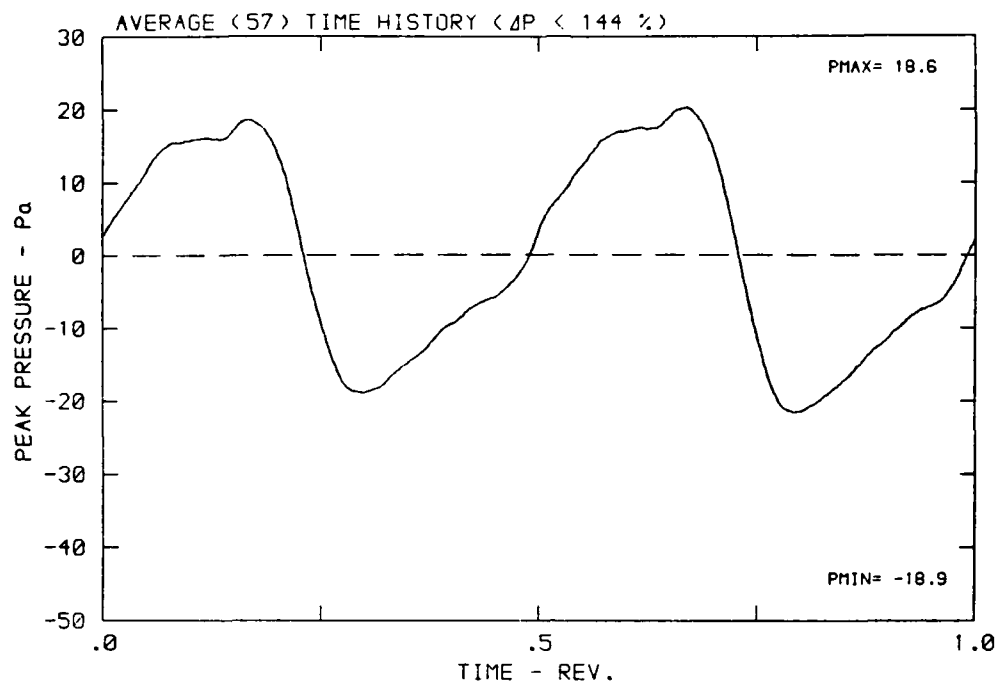
DATA POINT: EN-6 RUN: 162 MP: 7

β : 23.7° MH: .7773 n: 2400 rpm v/u : .263 ϕ : 7.3° T: 287.1 K



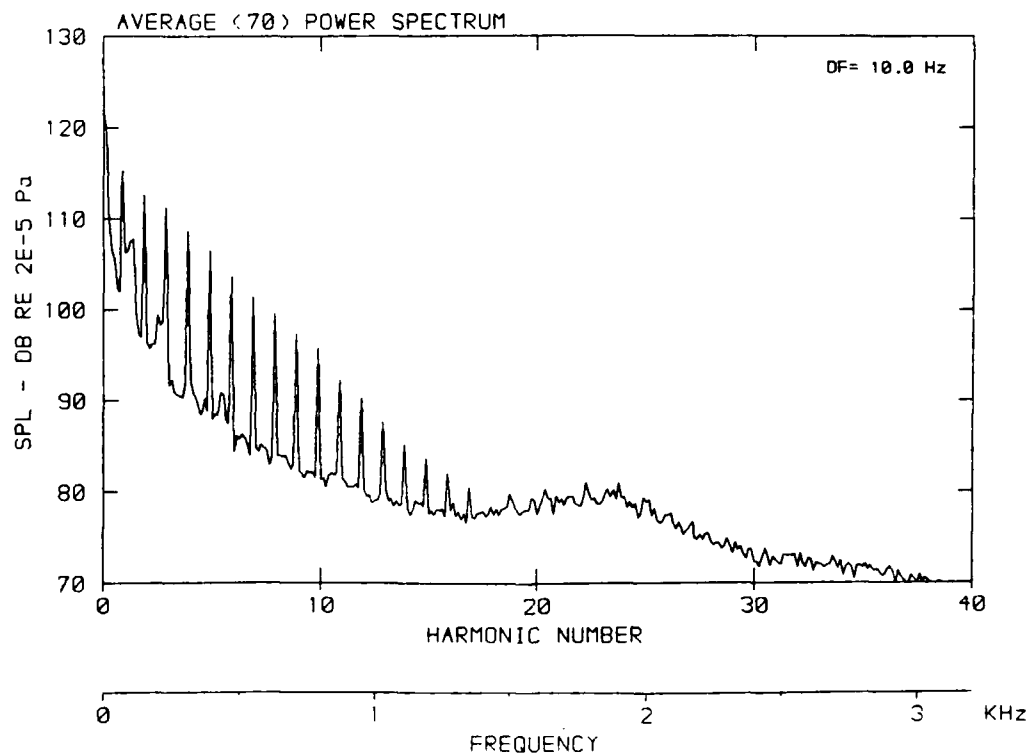
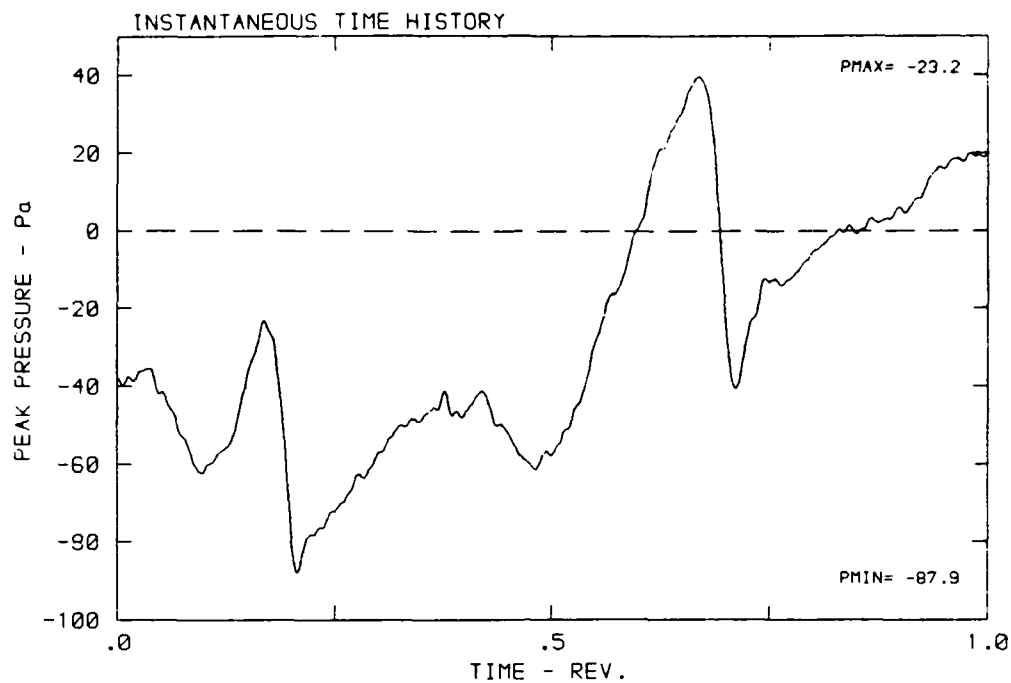
DATA POINT: EN-6 RUN: 162 MP: 7

β : 23.7° MH: .7773 n: 2400 rpm v/u: .263 ϕ : 7.3° T: 287.1 K



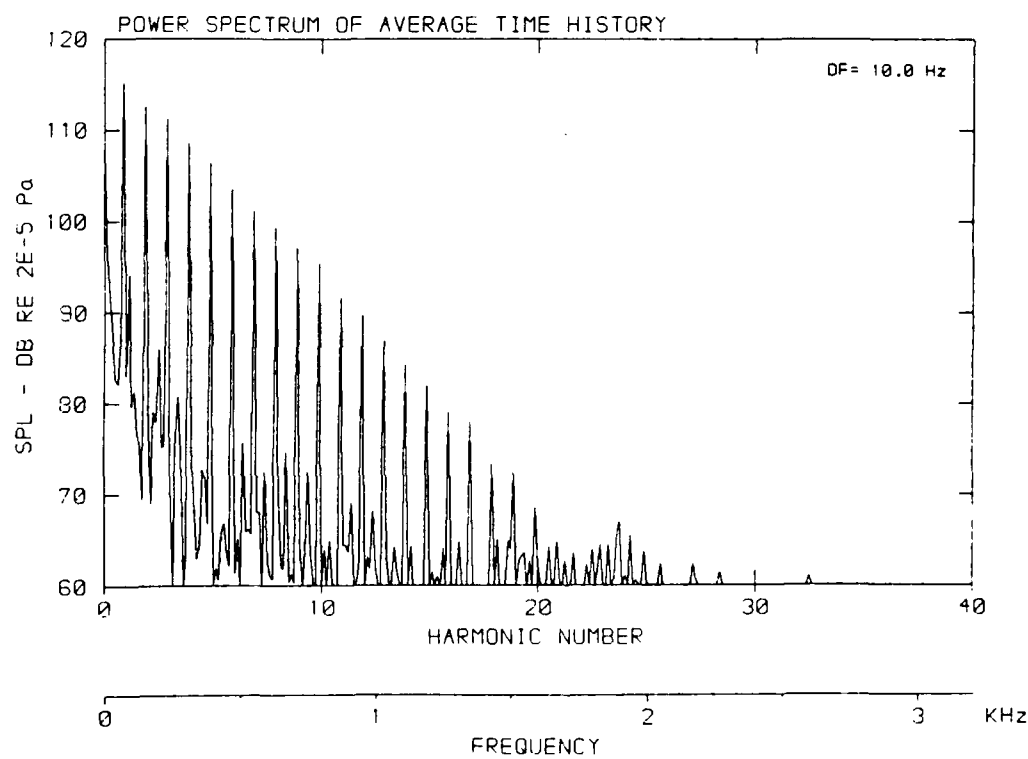
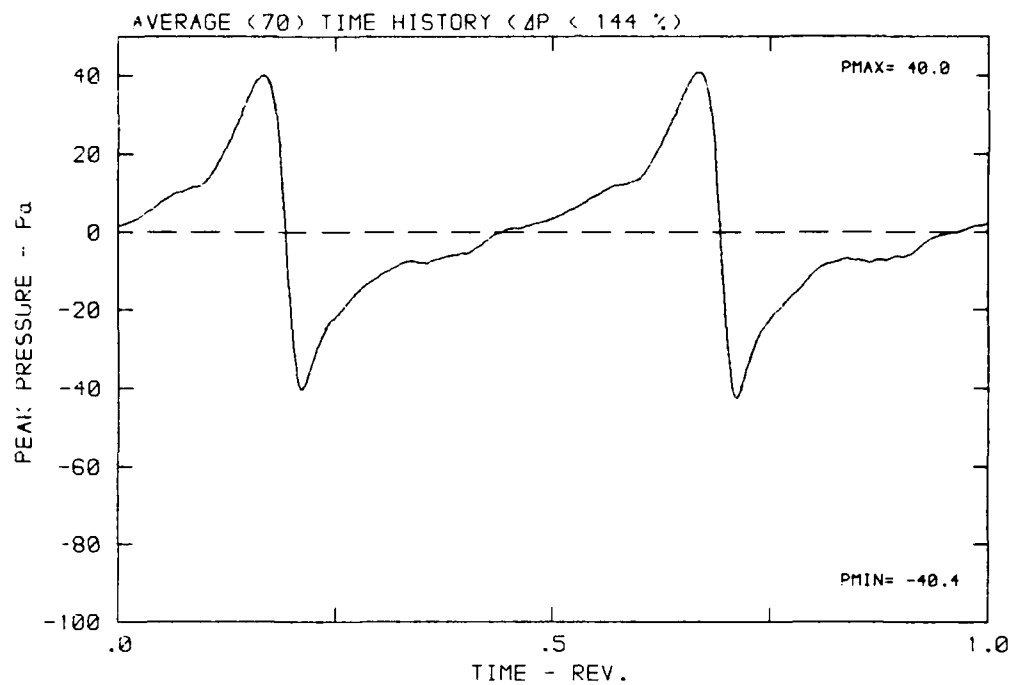
DATA POINT: EN-6 RUN: 162 MP: 8

β : 23.7° MH: .7773 n: 2400 rpm v/u: .263 ϕ : 7.3° T: 287.1 K



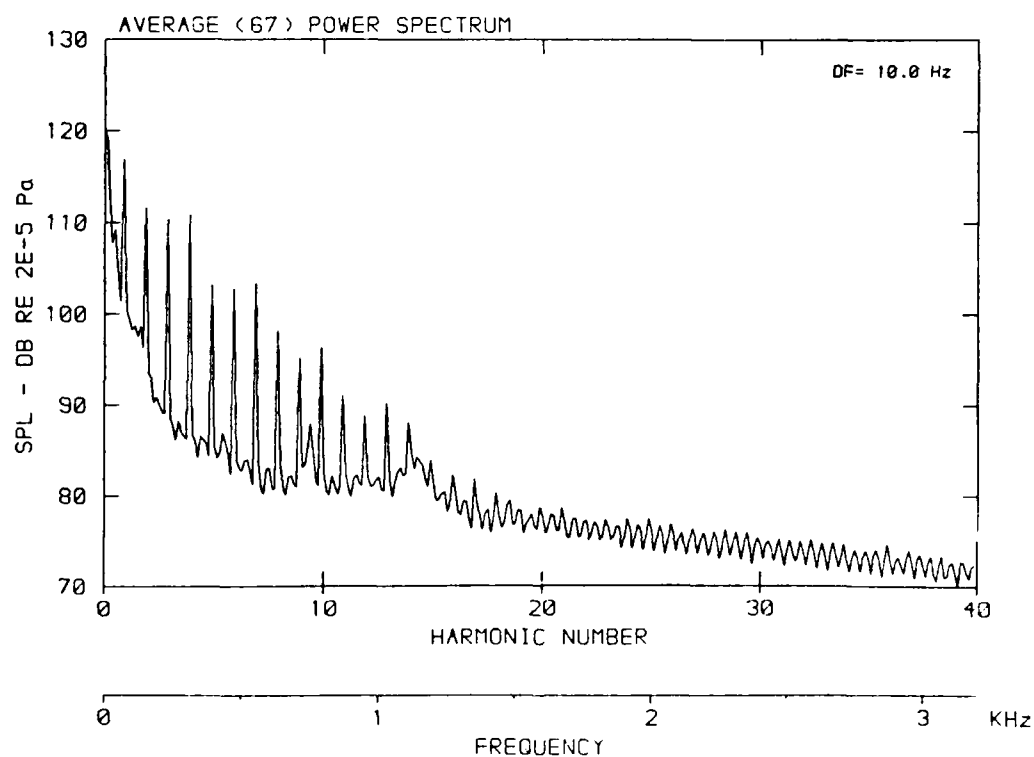
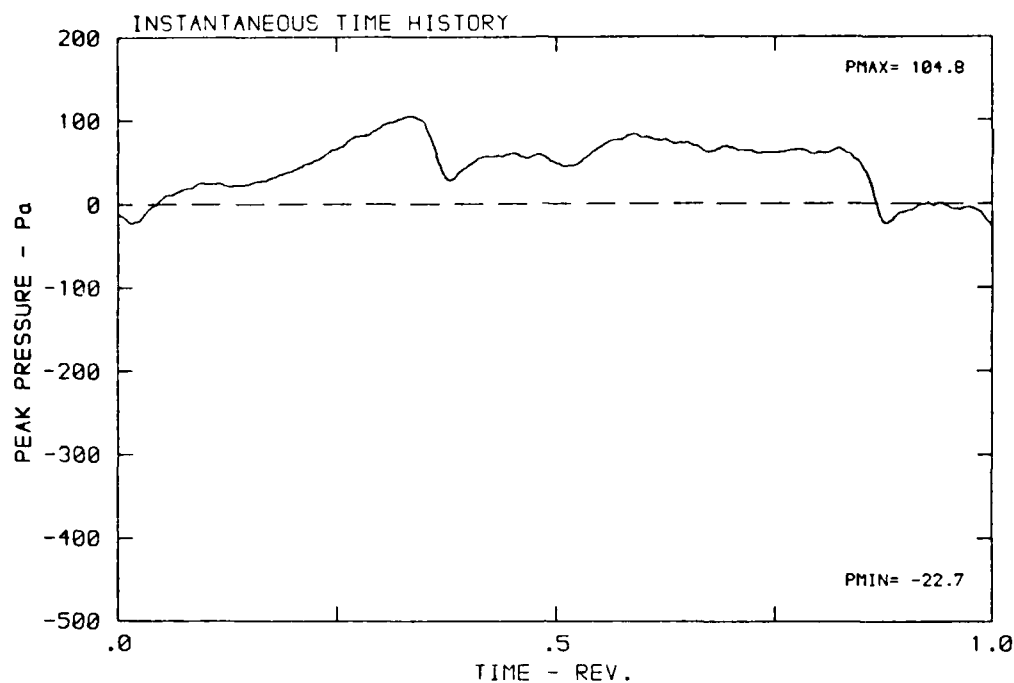
DATA POINT: EN-6 RUN: 162 MP: 8

β : 23.7° MH: .7773 n: 2400 rpm v/u : .263 ϕ : 7.3° T: 287.1 K



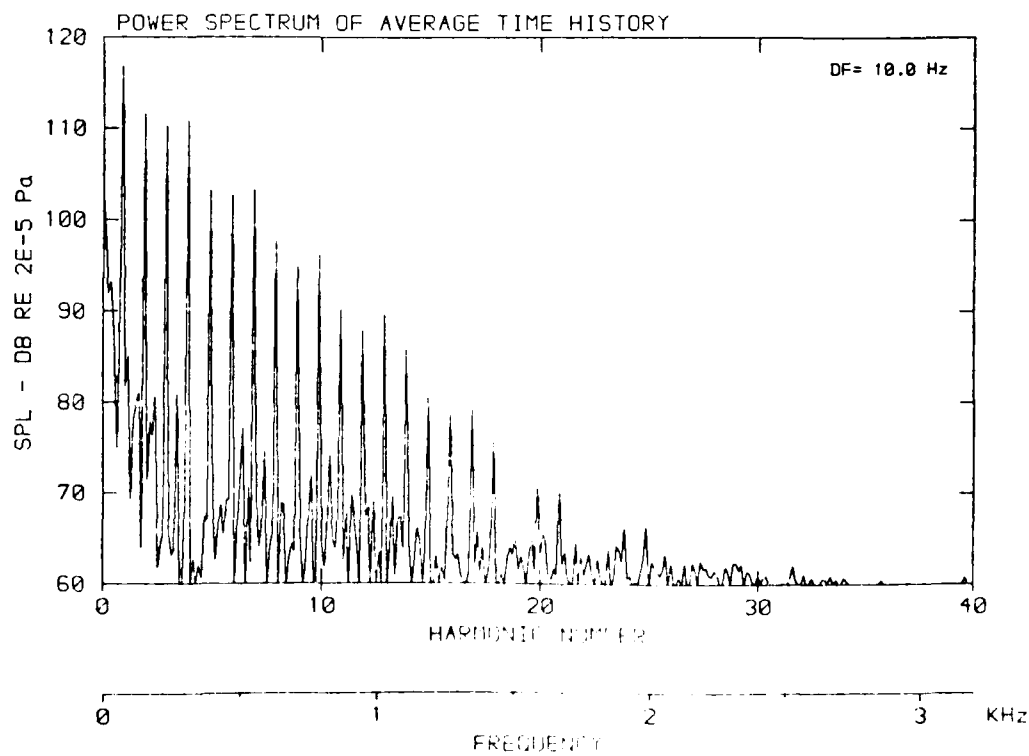
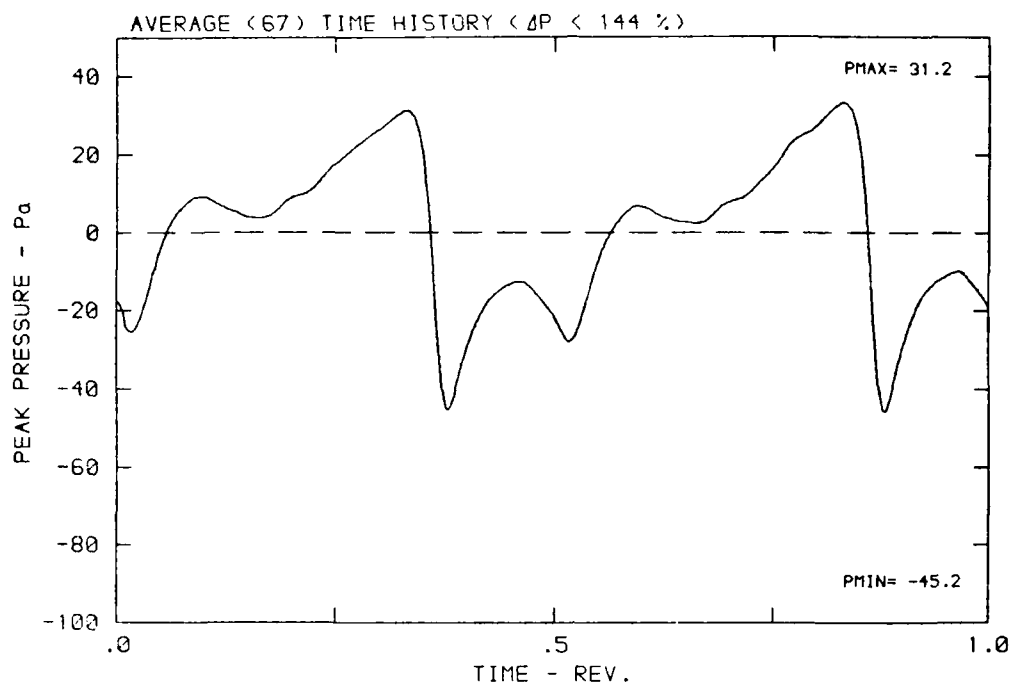
DATA POINT: EN-6 RUN: 162 MP: 9

β : 23.7° MH: .7773 n: 2400 rpm v/u : .263 ϕ : 7.3° T: 287.1 K



DATA POINT: EN-6 RUN: 162 MP: 9

β : 23.7° MH: .7773 n: 2400 rpm v/u: .263 ϕ : 7.3° T: 287.1 K



6. Propeller Rotational Harmonic Noise- and Overall Noise Levels

From all spectra of averaged time-histories the harmonic pressure levels are determined under the presupposition of a 10 dB signal-to-noise ratio, and are submitted to the A-weighting function. Both linear and A-weighted harmonic levels as well as the respective overall pressure levels (calculated from the energy sum of harmonic levels) are listed in the following tables.

DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
GN-1 / 151				GN-2 / 152			GN-3 / 153			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	94.2	68.0	80.0	103.4	80.9	90.0	108.4	89.3	
2	140.0	87.3	71.2	160.0	100.3	86.9	180.0	103.4	92.5	
3	210.0	83.1	72.2	240.0	94.9	86.3	270.0	104.3	95.7	
4	280.0	76.2	67.6	320.0	92.2	85.6	360.0	98.6	93.8	
5	350.0	74.3	67.7	400.0	86.7	81.9	450.0	94.6	91.4	
6	420.0	62.3	57.5	480.0	75.2	72.0	540.0	87.1	83.9	
7	490.0	59.7	56.5	560.0	78.1	74.9	630.0	92.7	90.8	
8	560.0	67.3	64.1	640.0	69.8	67.9	720.0	91.6	90.8	
9	630.0	59.1	57.2	720.0	62.3	61.5	810.0	79.2	78.4	
10	700.0	0.0	0.0	800.0	70.6	69.8	900.0	85.2	85.2	
11	770.0	0.0	0.0	880.0	52.3	51.5	990.0	75.5	75.5	
12	840.0	0.0	0.0	960.0	0.0	0.0	1080.0	75.7	75.7	
13	910.0	0.0	0.0	1040.0	0.0	0.0	1170.0	70.0	70.6	
14	980.0	0.0	0.0	1120.0	0.0	0.0	1260.0	69.1	69.7	
15	1050.0	0.0	0.0	1200.0	0.0	0.0	1350.0	70.4	71.0	
16	1120.0	0.0	0.0	1280.0	0.0	0.0	1440.0	57.3	58.3	
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	0.0	0.0	
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	0.0	0.0	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	0.0	0.0	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	0.0	0.0	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	0.0	0.0	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		95.4	77.2	105.8		92.1	111.2		101.2	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
GN-1 / 151				GN-2 / 152			GN-3 / 153			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	100.8	74.6	80.0	103.6	81.1	90.0	110.7	91.6	
2	140.0	97.6	81.5	160.0	105.6	92.2	180.0	116.5	105.6	
3	210.0	92.7	81.8	240.0	100.7	92.1	270.0	104.0	95.4	
4	280.0	87.6	79.0	320.0	97.5	90.9	360.0	108.5	103.7	
5	350.0	82.2	75.6	400.0	94.4	89.6	450.0	105.9	102.7	
6	420.0	76.7	71.9	480.0	93.3	90.1	540.0	104.7	101.5	
7	490.0	70.0	66.8	560.0	88.9	85.7	630.0	102.0	100.1	
8	560.0	71.3	68.1	640.0	84.0	82.1	720.0	94.8	94.0	
9	630.0	0.0	0.0	720.0	76.6	75.8	810.0	97.5	96.7	
10	700.0	0.0	0.0	800.0	78.1	77.3	900.0	96.6	96.6	
11	770.0	0.0	0.0	880.0	75.8	75.0	990.0	92.5	92.5	
12	840.0	0.0	0.0	960.0	69.6	69.6	1080.0	87.8	87.8	
13	910.0	0.0	0.0	1040.0	60.6	60.6	1170.0	89.4	90.0	
14	980.0	0.0	0.0	1120.0	0.0	0.0	1260.0	85.0	85.6	
15	1050.0	0.0	0.0	1200.0	0.0	0.0	1350.0	85.6	86.2	
16	1120.0	0.0	0.0	1280.0	0.0	0.0	1440.0	77.1	78.1	
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	74.6	75.6	
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	74.6	75.6	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	71.1	72.1	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	0.0	0.0	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	0.0	0.0	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		103.1	86.7	109.2		98.6	118.8		110.9	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
GN-1 / 151				GN-2 / 152				GN-3 / 153		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	103.0	76.8	80.0	105.8	83.3	90.0	111.0	91.9	
2	140.0	99.8	83.7	160.0	106.1	92.7	180.0	110.1	99.2	
3	210.0	94.3	83.4	240.0	103.3	94.7	270.0	109.5	100.9	
4	280.0	91.6	83.0	320.0	100.0	93.4	360.0	109.8	105.0	
5	350.0	87.1	80.5	400.0	99.3	94.5	450.0	109.4	106.2	
6	420.0	83.8	79.0	480.0	97.4	94.2	540.0	105.4	102.2	
7	490.0	76.6	73.4	560.0	90.7	87.5	630.0	106.3	104.4	
8	560.0	71.7	68.5	640.0	90.2	88.3	720.0	105.6	104.8	
9	630.0	69.1	67.2	720.0	87.3	86.5	810.0	103.3	102.5	
10	700.0	63.0	61.1	800.0	85.3	84.5	900.0	101.8	101.8	
11	770.0	0.0	0.0	880.0	79.6	78.8	990.0	99.8	99.8	
12	840.0	0.0	0.0	960.0	77.5	75.5	1080.0	98.6	98.6	
13	910.0	0.0	0.0	1040.0	74.4	74.4	1170.0	92.5	93.1	
14	980.0	0.0	0.0	1120.0	68.7	68.7	1260.0	95.4	96.0	
15	1050.0	0.0	0.0	1200.0	65.7	66.3	1350.0	92.2	92.8	
16	1120.0	0.0	0.0	1280.0	67.0	67.6	1440.0	90.4	91.4	
17	1190.0	0.0	0.0	1360.0	62.6	63.2	1530.0	86.5	87.5	
18	1260.0	0.0	0.0	1440.0	52.1	53.1	1620.0	88.1	89.1	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	84.2	85.2	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	79.2	80.4	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	78.8	80.0	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	76.4	77.6	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	73.2	74.4	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	68.7	69.9	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	72.3	73.6	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	69.7	71.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	67.3	68.6	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	69.7	71.0	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	66.0	67.3	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	64.5	65.8	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		105.4	89.7	111.1		101.7	118.3		113.6	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
GN-1 / 151				GN-2 / 152				GN-3 / 153		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	104.5	78.3	80.0	109.6	87.1	90.0	111.4	92.3	
2	140.0	100.7	84.6	160.0	106.0	92.6	180.0	110.2	99.3	
3	210.0	94.8	83.9	240.0	105.4	96.8	270.0	112.4	103.8	
4	280.0	94.3	85.7	320.0	103.7	97.1	360.0	110.5	105.7	
5	350.0	88.5	81.9	400.0	100.3	95.5	450.0	110.0	106.8	
6	420.0	83.6	78.8	480.0	97.7	94.5	540.0	108.9	105.7	
7	490.0	78.7	75.5	560.0	96.6	93.4	630.0	108.1	106.2	
8	560.0	77.1	73.9	640.0	94.1	92.2	720.0	106.6	105.8	
9	630.0	71.6	69.7	720.0	88.8	88.0	810.0	105.4	104.6	
10	700.0	61.5	59.6	800.0	86.9	86.1	900.0	103.9	103.9	
11	770.0	0.0	0.0	880.0	85.7	84.9	990.0	102.9	102.9	
12	840.0	0.0	0.0	960.0	79.3	79.3	1080.0	101.7	101.7	
13	910.0	0.0	0.0	1040.0	79.2	79.2	1170.0	100.7	101.3	
14	980.0	0.0	0.0	1120.0	74.9	74.9	1260.0	95.8	96.4	
15	1050.0	0.0	0.0	1200.0	73.1	73.7	1350.0	97.3	97.9	
16	1120.0	0.0	0.0	1280.0	68.3	68.9	1440.0	95.6	96.6	
17	1190.0	0.0	0.0	1360.0	69.1	69.7	1530.0	90.7	91.7	
18	1260.0	0.0	0.0	1440.0	64.7	65.7	1620.0	91.4	92.4	
19	1330.0	0.0	0.0	1520.0	61.1	62.1	1710.0	89.4	90.4	
20	1400.0	0.0	0.0	1600.0	53.2	54.2	1800.0	87.1	88.3	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	85.0	86.2	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	81.2	82.4	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	80.8	82.0	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	79.1	80.3	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	77.0	78.3	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	74.8	76.1	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	74.5	75.8	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	70.0	71.3	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	71.9	73.2	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	69.4	70.7	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	62.4	63.7	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	66.8	68.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		106.7	91.1	113.3		103.8	119.7		115.6	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
GN-1 / 151				GN-2 / 152			GN-3 / 153			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	105.0	78.8	80.0	112.6	90.1	90.0	110.9	91.8	
2	140.0	101.8	85.7	160.0	107.1	93.7	180.0	110.6	99.7	
3	210.0	93.4	82.5	240.0	103.6	95.0	270.0	113.6	105.0	
4	280.0	93.3	84.7	320.0	106.8	100.2	360.0	114.8	110.0	
5	350.0	90.0	83.4	400.0	102.9	98.1	450.0	106.2	103.0	
6	420.0	83.1	78.3	480.0	95.4	92.2	540.0	109.5	106.3	
7	490.0	75.8	72.6	560.0	97.7	94.5	630.0	109.8	107.9	
8	560.0	77.2	74.0	640.0	95.2	93.3	720.0	105.7	104.9	
9	630.0	73.3	71.4	720.0	91.4	90.6	810.0	105.3	104.5	
10	700.0	64.8	62.9	800.0	88.0	87.2	900.0	103.2	103.2	
11	770.0	64.9	64.1	880.0	85.2	84.4	990.0	104.1	104.1	
12	840.0	58.7	57.9	960.0	84.8	84.8	1080.0	101.2	101.2	
13	910.0	0.0	0.0	1040.0	81.0	81.0	1170.0	100.1	100.7	
14	980.0	0.0	0.0	1120.0	74.8	74.8	1260.0	100.1	100.7	
15	1050.0	0.0	0.0	1200.0	73.3	73.9	1350.0	96.5	97.1	
16	1120.0	0.0	0.0	1280.0	73.4	74.0	1440.0	95.4	96.4	
17	1190.0	0.0	0.0	1360.0	68.2	68.8	1530.0	94.0	95.0	
18	1260.0	0.0	0.0	1440.0	60.5	61.5	1620.0	90.7	91.7	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	90.1	91.1	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	88.8	90.0	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	85.5	86.7	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	85.4	86.6	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	83.8	85.0	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	81.3	82.5	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	79.8	81.1	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	77.9	79.2	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	75.0	76.3	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	73.5	74.8	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	70.7	72.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	69.2	70.5	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		107.2	91.0	115.3		105.1	120.7		116.3	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
GN-1 / 151				GN-2 / 152			GN-3 / 153			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	104.4	78.2	80.0	114.5	92.0	90.0	109.3	90.2	
2	140.0	100.3	84.2	160.0	106.5	93.1	180.0	108.4	97.5	
3	210.0	91.1	80.2	240.0	104.5	95.9	270.0	110.2	101.6	
4	280.0	92.0	83.4	320.0	106.2	99.6	360.0	109.5	104.7	
5	350.0	88.8	82.2	400.0	99.4	94.6	450.0	102.4	99.2	
6	420.0	76.1	71.3	480.0	93.7	90.5	540.0	107.7	104.5	
7	490.0	75.0	71.8	560.0	96.2	93.0	630.0	104.8	102.9	
8	560.0	74.5	71.3	640.0	90.8	88.9	720.0	99.1	98.3	
9	630.0	68.2	66.3	720.0	80.5	79.7	810.0	103.1	102.3	
10	700.0	58.3	56.4	800.0	86.7	85.9	900.0	98.2	98.2	
11	770.0	0.0	0.0	880.0	81.9	81.1	990.0	95.2	95.2	
12	840.0	0.0	0.0	960.0	75.0	75.0	1080.0	96.9	96.9	
13	910.0	0.0	0.0	1040.0	74.4	74.4	1170.0	93.8	94.4	
14	980.0	0.0	0.0	1120.0	72.4	72.4	1260.0	91.3	91.9	
15	1050.0	0.0	0.0	1200.0	68.3	68.9	1350.0	91.9	92.5	
16	1120.0	0.0	0.0	1280.0	63.3	63.9	1440.0	88.0	89.0	
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	84.2	85.2	
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	82.7	83.7	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	84.0	85.0	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	75.1	76.3	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	77.9	79.1	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	76.4	77.6	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	65.4	66.6	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		106.2	89.4	116.1		103.8	117.0		111.8	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
GN-1 / 151				GN-2 / 152			GN-3 / 153			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	100.5	74.3	80.0	111.5	89.0	90.0	110.8	91.7	
2	140.0	91.5	75.4	160.0	103.0	89.6	180.0	0.0	0.0	
3	210.0	88.0	77.1	240.0	99.6	91.0	270.0	0.0	0.0	
4	280.0	77.8	69.2	320.0	92.1	85.5	360.0	0.0	0.0	
5	350.0	0.0	0.0	400.0	87.6	82.8	450.0	0.0	0.0	
6	420.0	0.0	0.0	480.0	77.3	74.1	540.0	0.0	0.0	
7	490.0	0.0	0.0	560.0	80.0	76.8	630.0	0.0	0.0	
8	560.0	0.0	0.0	640.0	76.3	74.4	720.0	0.0	0.0	
9	630.0	0.0	0.0	720.0	58.9	58.1	810.0	0.0	0.0	
10	700.0	0.0	0.0	800.0	0.0	0.0	900.0	0.0	0.0	
11	770.0	0.0	0.0	880.0	0.0	0.0	990.0	0.0	0.0	
12	840.0	0.0	0.0	960.0	0.0	0.0	1080.0	0.0	0.0	
13	910.0	0.0	0.0	1040.0	0.0	0.0	1170.0	0.0	0.0	
14	980.0	0.0	0.0	1120.0	0.0	0.0	1260.0	0.0	0.0	
15	1050.0	0.0	0.0	1200.0	0.0	0.0	1350.0	0.0	0.0	
16	1120.0	0.0	0.0	1280.0	0.0	0.0	1440.0	0.0	0.0	
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	0.0	0.0	
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	0.0	0.0	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	0.0	0.0	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	0.0	0.0	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	0.0	0.0	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		101.2	80.8	112.3		95.5	110.8		91.7	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
CN-3 / 101				CN-4 / 100				CN-7 / 99		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	101.7	75.5	70.0	112.0	85.8	75.0	113.9	91.4	
2	120.0	90.7	74.6	140.0	98.4	82.3	150.0	107.3	93.9	
3	180.0	83.1	72.2	210.0	93.2	82.3	225.0	100.1	91.5	
4	240.0	76.5	67.9	280.0	77.8	69.2	300.0	85.7	79.1	
5	300.0	74.2	67.6	350.0	78.2	71.6	375.0	77.6	72.8	
6	360.0	72.1	67.3	420.0	73.6	68.8	450.0	69.6	66.4	
7	420.0	70.7	65.9	490.0	68.5	65.3	525.0	78.7	75.5	
8	480.0	68.2	65.0	560.0	61.3	58.1	600.0	67.7	65.8	
9	540.0	61.1	57.9	630.0	0.0	0.0	675.0	70.5	68.6	
10	600.0	0.0	0.0	700.0	0.0	0.0	750.0	69.5	68.7	
11	660.0	0.0	0.0	770.0	0.0	0.0	825.0	68.4	67.6	
12	720.0	0.0	0.0	840.0	0.0	0.0	900.0	56.0	56.0	
13	780.0	0.0	0.0	910.0	0.0	0.0	975.0	0.0	0.0	
14	840.0	0.0	0.0	980.0	0.0	0.0	1050.0	0.0	0.0	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1125.0	0.0	0.0	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1200.0	0.0	0.0	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1275.0	0.0	0.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1350.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1425.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1500.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1575.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1650.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1725.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1800.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	1875.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	1950.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2025.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2100.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2175.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2250.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2325.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2400.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2475.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2550.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2625.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2700.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2775.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	2850.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	2925.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3000.0	0.0	0.0	
OASPL		102.1	80.2		112.2	88.8		114.9	97.3	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
CN-3 / 101				CN-4 / 100			CN-7 / 99				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	104.5	78.3	70.0	112.7	86.5	75.0	114.7	92.2		
2	120.0	97.8	81.7	140.0	107.4	91.3	150.0	111.2	97.8		
3	180.0	87.1	76.2	210.0	97.4	86.5	225.0	105.0	96.4		
4	240.0	72.8	64.2	280.0	97.1	88.5	300.0	104.0	97.4		
5	300.0	0.0	0.0	350.0	92.7	86.1	375.0	98.5	93.7		
6	360.0	0.0	0.0	420.0	81.3	76.5	450.0	87.2	84.0		
7	420.0	0.0	0.0	490.0	80.6	77.4	525.0	91.4	88.2		
8	480.0	0.0	0.0	560.0	77.4	74.2	600.0	88.0	86.1		
9	540.0	0.0	0.0	630.0	66.2	64.3	675.0	74.1	72.2		
10	600.0	0.0	0.0	700.0	0.0	0.0	750.0	76.1	75.3		
11	660.0	0.0	0.0	770.0	0.0	0.0	825.0	75.2	74.4		
12	720.0	0.0	0.0	840.0	0.0	0.0	900.0	68.4	68.4		
13	780.0	0.0	0.0	910.0	0.0	0.0	975.0	62.3	62.3		
14	840.0	0.0	0.0	980.0	0.0	0.0	1050.0	59.5	59.5		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1125.0	0.0	0.0		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1200.0	0.0	0.0		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1275.0	0.0	0.0		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1350.0	0.0	0.0		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1425.0	0.0	0.0		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1500.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1575.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1650.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1725.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1800.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	1875.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	1950.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2025.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2100.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2175.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2250.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2325.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2400.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2475.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2550.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2625.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2700.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2775.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	2850.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	2925.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3000.0	0.0	0.0		
OASPL		105.4	84.2			114.0	95.4			116.9	103.3

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL, DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 8 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
GN-1 / 151			GN-2 / 152			GN-3 / 153				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	101.9	75.7	80.0	107.0	84.5	90.0	107.7	88.6	
2	140.0	100.5	84.4	160.0	105.1	91.7	180.0	109.3	98.4	
3	210.0	95.4	84.5	240.0	105.0	96.4	270.0	109.3	100.7	
4	280.0	91.1	82.5	320.0	101.5	94.9	360.0	108.8	104.0	
5	350.0	84.8	78.2	400.0	99.4	94.6	450.0	108.0	104.8	
6	420.0	81.8	77.0	480.0	97.1	93.9	540.0	107.7	104.5	
7	490.0	78.7	75.5	560.0	94.8	91.6	630.0	106.6	104.7	
8	560.0	73.5	70.3	640.0	90.3	88.4	720.0	105.8	105.0	
9	630.0	67.9	66.0	720.0	90.0	89.2	810.0	105.0	104.2	
10	700.0	64.1	62.2	800.0	87.2	86.4	900.0	103.1	103.1	
11	770.0	0.0	0.0	880.0	83.1	82.3	990.0	101.9	101.9	
12	840.0	0.0	0.0	960.0	80.6	80.6	1080.0	100.0	100.0	
13	910.0	0.0	0.0	1040.0	78.3	78.3	1170.0	98.3	98.9	
14	980.0	0.0	0.0	1120.0	74.0	74.0	1260.0	96.7	97.3	
15	1050.0	0.0	0.0	1200.0	72.5	73.1	1350.0	94.8	95.4	
16	1120.0	0.0	0.0	1280.0	68.0	68.6	1440.0	92.7	93.7	
17	1190.0	0.0	0.0	1360.0	68.6	69.2	1530.0	90.8	91.8	
18	1260.0	0.0	0.0	1440.0	63.2	64.2	1620.0	89.1	90.1	
19	1330.0	0.0	0.0	1520.0	59.2	60.2	1710.0	87.8	88.8	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	85.9	87.1	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	85.1	86.3	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	80.4	81.6	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	80.2	81.4	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	78.3	79.5	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	75.6	76.9	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	75.4	76.7	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	72.8	74.1	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	69.7	71.0	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	70.9	72.2	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	67.1	68.4	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	67.3	68.6	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	66.8	68.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		105.0	89.7		111.7	102.6		117.8	114.1	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
GN-1 / 151				GN-2 / 152			GN-3 / 153			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	100.7	74.5	80.0	108.4	85.9	90.0	105.3	86.2	
2	140.0	99.1	83.0	160.0	103.0	89.6	180.0	106.5	95.6	
3	210.0	90.2	79.3	240.0	100.4	91.8	270.0	112.3	103.7	
4	280.0	92.5	83.9	320.0	103.6	97.0	360.0	109.8	105.0	
5	350.0	86.5	79.9	400.0	96.8	92.0	450.0	108.7	105.5	
6	420.0	82.1	77.3	480.0	96.9	93.7	540.0	108.5	105.3	
7	490.0	76.3	73.1	560.0	94.6	91.4	630.0	106.6	104.7	
8	560.0	74.0	70.8	640.0	91.1	89.2	720.0	105.4	104.6	
9	630.0	73.2	71.3	720.0	88.4	87.6	810.0	106.0	105.2	
10	700.0	65.8	63.9	800.0	87.9	87.1	900.0	102.0	102.0	
11	770.0	0.0	0.0	880.0	83.3	82.5	990.0	100.4	100.4	
12	840.0	0.0	0.0	960.0	78.7	78.7	1080.0	101.5	101.5	
13	910.0	0.0	0.0	1040.0	80.8	80.8	1170.0	100.3	100.9	
14	980.0	0.0	0.0	1120.0	73.7	73.7	1260.0	96.7	97.3	
15	1050.0	0.0	0.0	1200.0	73.8	74.4	1350.0	96.7	97.3	
16	1120.0	0.0	0.0	1280.0	69.9	70.5	1440.0	94.8	95.8	
17	1190.0	0.0	0.0	1360.0	69.8	70.4	1530.0	92.3	93.3	
18	1260.0	0.0	0.0	1440.0	61.4	62.4	1620.0	90.9	91.9	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	89.6	90.6	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	88.7	89.9	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	86.7	87.9	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	82.2	83.4	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	80.3	81.5	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	79.1	80.3	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	71.5	72.8	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		103.7	88.8	111.4		101.9	118.3		114.7	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
GN-4 / 148				GN-5 / 149				GN-6 / 150			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	91.7	65.5	70.0	98.5	72.3	80.0	106.0	83.5		
2	120.0	80.2	64.1	140.0	85.5	69.4	160.0	99.3	85.9		
3	180.0	68.3	57.4	210.0	86.3	75.4	240.0	95.6	87.0		
4	240.0	62.7	54.1	280.0	79.6	71.0	320.0	90.8	84.2		
5	300.0	0.0	0.0	350.0	76.2	69.6	400.0	88.1	83.3		
6	360.0	0.0	0.0	420.0	56.3	51.5	480.0	74.4	71.2		
7	420.0	0.0	0.0	490.0	66.2	63.0	560.0	65.7	62.5		
8	480.0	0.0	0.0	560.0	71.5	68.3	640.0	0.0	0.0		
9	540.0	0.0	0.0	630.0	67.7	65.8	720.0	0.0	0.0		
10	600.0	0.0	0.0	700.0	61.4	59.5	800.0	0.0	0.0		
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	0.0	0.0		
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	0.0	0.0		
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	0.0	0.0		
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	0.0	0.0		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		92.0	68.4		99.0	79.8		107.3	92.1		

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
GN-4 / 148				GN-5 / 149				GN-6 / 150		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	94.4	68.2	70.0	103.0	76.8	80.0	105.4	82.9	
2	120.0	91.0	74.9	140.0	99.3	83.2	160.0	106.0	92.6	
3	180.0	85.5	74.6	210.0	93.7	82.8	240.0	101.6	93.0	
4	240.0	78.4	69.8	280.0	89.2	80.6	320.0	98.5	91.9	
5	300.0	60.0	53.4	350.0	82.6	76.0	400.0	94.0	89.2	
6	360.0	0.0	0.0	420.0	79.6	74.8	480.0	93.5	90.3	
7	420.0	0.0	0.0	490.0	74.3	71.1	560.0	88.7	85.5	
8	480.0	0.0	0.0	560.0	69.9	66.7	640.0	84.2	82.3	
9	540.0	0.0	0.0	630.0	64.8	62.9	720.0	81.3	80.5	
10	600.0	0.0	0.0	700.0	0.0	0.0	800.0	76.3	75.5	
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	65.0	64.2	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	0.0	0.0	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	0.0	0.0	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	0.0	0.0	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		96.5	78.8	105.1		88.2	110.1		99.1	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
GN-4 / 148				GN-5 / 149			GN-6 / 150			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	97.0	70.8	70.0	105.2	79.0	80.0	106.4	83.9	
2	120.0	94.0	77.9	140.0	101.5	85.4	160.0	106.3	92.9	
3	180.0	87.0	76.1	210.0	96.2	85.3	240.0	103.5	94.9	
4	240.0	80.6	72.0	280.0	93.4	84.8	320.0	100.6	94.0	
5	300.0	68.7	62.1	350.0	88.9	82.3	400.0	100.4	95.6	
6	360.0	70.5	65.7	420.0	83.3	78.5	480.0	97.4	94.2	
7	420.0	67.2	62.4	490.0	75.9	72.7	560.0	91.5	88.3	
8	480.0	0.0	0.0	560.0	74.1	70.9	640.0	92.0	90.1	
9	540.0	0.0	0.0	630.0	73.7	71.8	720.0	87.2	86.5	
10	600.0	0.0	0.0	700.0	63.5	61.6	800.0	86.1	85.3	
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	80.5	79.7	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	77.9	77.9	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	74.9	74.9	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	69.9	69.9	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		99.1	81.3		107.4	91.3		111.5	102.2	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
GN-4 / 148				GN-5 / 149				GN-6 / 150			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	99.3	73.1	70.0	106.6	80.4	80.0	109.1	86.6		
2	120.0	95.7	79.6	140.0	102.5	86.4	160.0	105.9	92.5		
3	180.0	88.3	77.4	210.0	96.9	86.0	240.0	105.6	97.0		
4	240.0	82.2	73.6	280.0	96.4	87.8	320.0	103.5	96.9		
5	300.0	77.6	71.0	350.0	88.6	82.0	400.0	100.8	96.0		
6	360.0	64.5	59.7	420.0	81.7	76.9	480.0	98.2	95.0		
7	420.0	0.0	0.0	490.0	80.9	77.7	560.0	97.3	94.1		
8	480.0	0.0	0.0	560.0	77.3	74.1	640.0	93.7	91.8		
9	540.0	0.0	0.0	630.0	70.6	68.7	720.0	90.1	89.3		
10	600.0	0.0	0.0	700.0	67.9	66.0	800.0	87.1	86.3		
11	660.0	0.0	0.0	770.0	68.1	67.3	880.0	86.6	85.8		
12	720.0	0.0	0.0	840.0	59.2	58.4	960.0	78.2	78.2		
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	80.2	80.2		
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	76.8	76.8		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	74.4	75.0		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	67.4	68.0		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		101.2	83.1			108.7	92.7			113.2	104.0

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
GN-4 / 148				GN-5 / 149			GN-6 / 150			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	101.1	74.9	70.0	107.5	81.3	80.0	112.1	89.6	
2	120.0	96.2	80.1	140.0	103.2	87.1	160.0	107.1	93.7	
3	180.0	86.3	75.4	210.0	94.9	84.0	240.0	104.4	95.8	
4	240.0	77.1	68.5	280.0	95.6	87.0	320.0	107.4	100.8	
5	300.0	0.0	0.0	350.0	92.3	85.7	400.0	102.0	97.2	
6	360.0	0.0	0.0	420.0	87.1	82.3	480.0	96.0	92.8	
7	420.0	0.0	0.0	490.0	78.4	75.2	560.0	97.7	94.5	
8	480.0	0.0	0.0	560.0	77.4	74.2	640.0	96.5	94.6	
9	540.0	0.0	0.0	630.0	75.1	73.2	720.0	90.8	90.0	
10	600.0	0.0	0.0	700.0	61.0	59.1	800.0	87.5	86.7	
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	83.1	82.3	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	84.8	84.8	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	81.0	81.0	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	77.9	77.9	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	75.2	75.8	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	75.1	75.7	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	65.5	66.1	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	61.3	62.3	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		102.5	82.4	109.4		93.1	115.2		105.4	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
GN-4 / 148			GN-5 / 149			GN-6 / 150				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	101.3	75.1	70.0	108.1	81.9	80.0	114.7	92.2	
2	120.0	93.9	77.8	140.0	102.9	86.8	160.0	107.2	93.8	
3	180.0	85.7	74.8	210.0	96.1	85.2	240.0	104.6	96.0	
4	240.0	73.8	65.2	280.0	96.0	87.4	320.0	106.2	99.6	
5	300.0	74.2	67.6	350.0	91.1	84.5	400.0	98.8	94.0	
6	360.0	64.4	59.6	420.0	79.6	74.8	480.0	94.5	91.3	
7	420.0	0.0	0.0	490.0	80.0	76.8	560.0	96.4	93.2	
8	480.0	0.0	0.0	560.0	70.8	67.6	640.0	92.1	90.2	
9	540.0	0.0	0.0	630.0	0.0	0.0	720.0	80.5	79.7	
10	600.0	0.0	0.0	700.0	0.0	0.0	800.0	87.7	86.9	
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	82.9	82.1	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	72.8	72.8	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	0.0	0.0	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	0.0	0.0	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		102.1	81.2	109.7		92.8	116.4		104.0	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
GN-4 / 148			GN-5 / 149			GN-6 / 150				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	94.6	68.4	70.0	107.5	81.3	80.0	113.0	90.5	
2	120.0	87.0	70.9	140.0	97.9	81.8	160.0	99.8	86.4	
3	180.0	75.7	64.8	210.0	90.3	79.4	240.0	98.9	90.3	
4	240.0	72.4	63.8	280.0	82.4	73.8	320.0	90.5	83.9	
5	300.0	59.9	53.3	350.0	71.9	65.3	400.0	81.3	76.5	
6	360.0	0.0	0.0	420.0	76.7	71.9	480.0	83.3	80.1	
7	420.0	0.0	0.0	490.0	70.8	67.6	560.0	81.2	78.0	
8	480.0	0.0	0.0	560.0	65.7	62.5	640.0	74.5	72.6	
9	540.0	0.0	0.0	630.0	59.8	57.9	720.0	0.0	0.0	
10	600.0	0.0	0.0	700.0	0.0	0.0	800.0	0.0	0.0	
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	0.0	0.0	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	0.0	0.0	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	0.0	0.0	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	0.0	0.0	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		95.3	73.9	108.0		86.3	113.4		94.9	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 8 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
GN-4 / 148				GN-5 / 149				GN-6 / 150			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	101.3	75.1	70.0	105.7	79.5	80.0	108.5	86.0		
2	120.0	93.3	77.2	140.0	103.5	87.4	160.0	106.8	93.4		
3	180.0	85.7	74.8	210.0	98.0	87.1	240.0	105.7	97.1		
4	240.0	81.0	72.4	280.0	93.5	84.9	320.0	102.0	95.4		
5	300.0	72.5	65.9	350.0	88.1	81.5	400.0	100.7	95.9		
6	360.0	0.0	0.0	420.0	86.8	82.0	480.0	98.3	95.1		
7	420.0	0.0	0.0	490.0	82.1	78.9	560.0	95.4	92.2		
8	480.0	0.0	0.0	560.0	76.3	73.1	640.0	90.1	88.2		
9	540.0	0.0	0.0	630.0	72.9	71.0	720.0	89.5	88.7		
10	600.0	0.0	0.0	700.0	72.2	70.3	800.0	88.2	87.4		
11	660.0	0.0	0.0	770.0	67.9	67.1	880.0	83.6	82.8		
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	83.1	83.1		
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	78.7	78.7		
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	75.1	75.1		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		102.1	81.3			108.4	92.8			112.9	103.5

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
GN-4 / 148				GN-5 / 149			GN-6 / 150			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	103.6	77.4	70.0	103.7	77.5	80.0	107.5	85.0	
2	120.0	92.7	76.6	140.0	99.8	83.7	160.0	104.3	90.9	
3	180.0	87.1	76.2	210.0	92.5	81.6	240.0	101.6	93.0	
4	240.0	73.2	64.6	280.0	94.8	86.2	320.0	104.4	97.8	
5	300.0	0.0	0.0	350.0	89.5	82.9	400.0	97.2	92.4	
6	360.0	0.0	0.0	420.0	77.7	72.9	480.0	97.0	93.8	
7	420.0	0.0	0.0	490.0	79.7	76.5	560.0	95.3	92.1	
8	480.0	0.0	0.0	560.0	74.2	71.0	640.0	92.6	90.7	
9	540.0	0.0	0.0	630.0	72.8	70.9	720.0	89.8	89.0	
10	600.0	0.0	0.0	700.0	66.6	64.7	800.0	87.8	87.0	
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	84.3	83.5	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	78.8	78.8	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	83.1	83.1	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	73.8	73.8	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		104.0	81.6	105.9		90.6	111.6		102.6	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN											
LN-1 / 154				LN-2 / 155			LN-3 / 156				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	70.0	98.6	72.4	80.0	103.9	81.4	90.0	110.1	91.0		
2	140.0	90.4	74.3	160.0	102.1	88.7	180.0	105.7	94.8		
3	210.0	87.3	76.4	240.0	97.4	88.8	270.0	106.8	98.2		
4	280.0	79.7	71.1	320.0	93.8	87.2	360.0	102.6	97.8		
5	350.0	72.7	66.1	400.0	92.4	87.6	450.0	99.6	96.4		
6	420.0	59.1	54.3	480.0	80.0	76.8	540.0	93.0	89.8		
7	490.0	0.0	0.0	560.0	77.6	74.4	630.0	96.0	94.1		
8	560.0	0.0	0.0	640.0	76.6	74.7	720.0	94.9	94.1		
9	630.0	0.0	0.0	720.0	70.0	69.2	810.0	88.4	87.6		
10	700.0	0.0	0.0	800.0	71.7	70.9	900.0	88.1	88.1		
11	770.0	0.0	0.0	880.0	65.9	65.1	990.0	81.0	81.0		
12	840.0	0.0	0.0	960.0	57.7	57.7	1080.0	79.4	79.4		
13	910.0	0.0	0.0	1040.0	54.0	54.0	1170.0	68.0	68.6		
14	980.0	0.0	0.0	1120.0	0.0	0.0	1260.0	0.0	0.0		
15	1050.0	0.0	0.0	1200.0	0.0	0.0	1350.0	0.0	0.0		
16	1120.0	0.0	0.0	1280.0	0.0	0.0	1440.0	0.0	0.0		
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	0.0	0.0		
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	0.0	0.0		
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	0.0	0.0		
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	0.0	0.0		
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	0.0	0.0		
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0		
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0		
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0		
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0		
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0		
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0		
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0		
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0		
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0		
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0		
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0		
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0		
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0		
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0		
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0		
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0		
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0		
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0		
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0		
OASPL		99.6	80.2			107.0	94.5			113.5	104.6

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN											
LN-1 / 154				LN-2 / 155				LN-3 / 156			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	70.0	103.4	77.2	80.0	105.4	82.9	90.0	111.6	92.5		
2	140.0	99.3	83.2	160.0	106.7	93.3	180.0	117.7	106.8		
3	210.0	95.3	84.4	240.0	102.8	94.2	270.0	106.5	97.9		
4	280.0	90.3	81.7	320.0	98.3	91.7	360.0	110.2	105.4		
5	350.0	86.3	79.7	400.0	95.8	91.0	450.0	109.1	105.9		
6	420.0	81.8	77.0	480.0	96.8	93.6	540.0	108.3	105.1		
7	490.0	77.7	74.5	560.0	92.5	89.3	630.0	106.1	104.2		
8	560.0	69.9	66.7	640.0	88.5	86.6	720.0	101.2	100.4		
9	630.0	64.9	63.0	720.0	81.3	80.5	810.0	102.5	101.7		
10	700.0	60.7	58.8	800.0	82.2	81.4	900.0	101.8	101.8		
11	770.0	0.0	0.0	880.0	80.2	79.4	990.0	97.7	97.7		
12	840.0	0.0	0.0	960.0	74.0	74.0	1080.0	95.1	95.1		
13	910.0	0.0	0.0	1040.0	69.1	69.1	1170.0	96.0	96.6		
14	980.0	0.0	0.0	1120.0	66.3	66.3	1260.0	93.0	93.6		
15	1050.0	0.0	0.0	1200.0	63.7	64.3	1350.0	92.6	93.2		
16	1120.0	0.0	0.0	1280.0	61.8	62.4	1440.0	87.6	88.6		
17	1190.0	0.0	0.0	1360.0	53.8	54.4	1530.0	84.9	85.9		
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	84.6	85.6		
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	81.0	82.0		
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	79.7	80.9		
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	73.8	75.0		
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0		
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0		
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0		
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0		
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0		
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0		
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0		
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0		
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0		
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0		
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0		
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0		
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0		
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0		
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0		
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0		
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0		
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0		
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0		
OASPL		105.5	89.3			110.8	100.7			120.5	114.0

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN											
LN-1 / 154				LN-2 / 155				LN-3 / 156			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	70.0	104.3	78.1	80.0	108.2	85.7	90.0	111.7	92.6		
2	140.0	100.9	84.8	160.0	107.3	93.9	180.0	111.3	100.4		
3	210.0	95.9	85.0	240.0	105.1	96.5	270.0	110.6	102.0		
4	280.0	92.2	83.6	320.0	101.5	94.9	360.0	111.4	106.6		
5	350.0	88.4	81.8	400.0	101.5	96.7	450.0	111.3	108.1		
6	420.0	84.6	79.8	480.0	98.9	95.7	540.0	107.7	104.5		
7	490.0	77.3	74.1	560.0	93.0	89.8	630.0	108.9	107.0		
8	560.0	70.6	67.4	640.0	93.7	91.8	720.0	108.2	107.4		
9	630.0	0.0	0.0	720.0	91.0	90.2	810.0	106.7	105.9		
10	700.0	0.0	0.0	800.0	87.7	86.9	900.0	105.6	105.6		
11	770.0	0.0	0.0	880.0	83.4	82.6	990.0	104.3	104.3		
12	840.0	0.0	0.0	960.0	81.7	81.7	1080.0	102.2	102.2		
13	910.0	0.0	0.0	1040.0	78.9	78.9	1170.0	98.3	98.9		
14	980.0	0.0	0.0	1120.0	73.5	73.5	1260.0	100.2	100.8		
15	1050.0	0.0	0.0	1200.0	69.7	70.3	1350.0	97.4	98.0		
16	1120.0	0.0	0.0	1280.0	69.9	70.5	1440.0	95.5	96.5		
17	1190.0	0.0	0.0	1360.0	65.1	65.7	1530.0	92.8	93.8		
18	1260.0	0.0	0.0	1440.0	60.4	61.4	1620.0	94.2	95.2		
19	1330.0	0.0	0.0	1520.0	56.9	57.9	1710.0	91.3	92.3		
20	1400.0	0.0	0.0	1600.0	58.2	59.2	1800.0	85.7	86.9		
21	1470.0	0.0	0.0	1680.0	57.4	58.4	1890.0	86.9	88.1		
22	1540.0	0.0	0.0	1760.0	53.2	54.2	1980.0	85.8	87.0		
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	82.8	84.0		
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	79.8	81.0		
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	81.4	82.7		
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	76.5	77.8		
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	73.8	75.1		
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	74.5	75.8		
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	73.1	74.4		
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	69.3	70.6		
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0		
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0		
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0		
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0		
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0		
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0		
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0		
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0		
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0		
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0		
OASPL		106.6	90.8			112.9	103.6			120.1	116.3

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
LN-1 / 154				LN-2 / 155			LN-3 / 156			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	105.6	79.4	80.0	111.8	89.3	90.0	112.1	93.0	
2	140.0	102.1	86.0	160.0	107.0	93.6	180.0	110.8	99.9	
3	210.0	95.9	85.0	240.0	106.7	98.1	270.0	113.1	104.5	
4	280.0	94.1	85.5	320.0	104.0	97.4	360.0	111.9	107.1	
5	350.0	87.8	81.2	400.0	101.2	96.4	450.0	110.8	107.6	
6	420.0	85.0	80.2	480.0	99.6	96.4	540.0	110.1	106.9	
7	490.0	81.6	78.4	560.0	98.0	94.8	630.0	110.5	108.6	
8	560.0	77.2	74.0	640.0	96.1	94.2	720.0	108.1	107.3	
9	630.0	74.1	72.2	720.0	91.0	90.2	810.0	107.2	106.4	
10	700.0	68.9	67.0	800.0	89.7	88.9	900.0	107.2	107.2	
11	770.0	64.8	64.0	880.0	87.5	86.7	990.0	105.0	105.0	
12	840.0	55.5	54.7	960.0	82.1	82.1	1080.0	104.2	104.2	
13	910.0	0.0	0.0	1040.0	81.4	81.4	1170.0	103.6	104.2	
14	980.0	0.0	0.0	1120.0	79.0	79.0	1260.0	99.8	100.4	
15	1050.0	0.0	0.0	1200.0	75.3	75.9	1350.0	100.6	101.2	
16	1120.0	0.0	0.0	1280.0	70.0	70.6	1440.0	99.0	100.0	
17	1190.0	0.0	0.0	1360.0	71.0	71.6	1530.0	95.2	96.2	
18	1260.0	0.0	0.0	1440.0	66.0	67.0	1620.0	94.6	95.6	
19	1330.0	0.0	0.0	1520.0	61.4	62.4	1710.0	93.5	94.5	
20	1400.0	0.0	0.0	1600.0	59.8	60.8	1800.0	91.8	93.0	
21	1470.0	0.0	0.0	1680.0	58.1	59.1	1890.0	88.8	90.0	
22	1540.0	0.0	0.0	1760.0	56.5	57.5	1980.0	87.3	88.5	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	85.7	86.9	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	83.5	84.7	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	82.3	83.6	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	80.7	82.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	80.0	81.3	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	77.1	78.4	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	77.7	79.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	75.3	76.6	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	74.0	75.3	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	73.3	74.5	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	70.3	71.5	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	68.3	69.5	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		107.8	91.8	114.9		105.1	121.0		117.4	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
LN-1 / 154				LN-2 / 155			LN-3 / 156			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	106.1	79.9	80.0	114.3	91.8	90.0	113.0	93.9	
2	140.0	103.0	86.9	160.0	108.1	94.7	180.0	112.6	101.7	
3	210.0	93.8	82.9	240.0	105.3	96.7	270.0	113.0	104.4	
4	280.0	93.0	84.4	320.0	107.9	101.3	360.0	115.5	110.7	
5	350.0	92.2	85.6	400.0	103.0	98.2	450.0	107.0	103.8	
6	420.0	86.3	81.5	480.0	96.3	93.1	540.0	110.4	107.2	
7	490.0	78.8	75.6	560.0	97.8	94.6	630.0	110.8	108.9	
8	560.0	76.4	73.2	640.0	96.6	94.7	720.0	106.4	105.6	
9	630.0	71.8	69.9	720.0	92.1	91.3	810.0	106.7	105.9	
10	700.0	67.9	66.0	800.0	88.2	87.4	900.0	104.4	104.4	
11	770.0	66.1	65.3	880.0	85.7	84.9	990.0	105.3	105.3	
12	840.0	54.8	54.0	960.0	84.3	84.3	1080.0	102.8	102.8	
13	910.0	0.0	0.0	1040.0	81.9	81.9	1170.0	101.6	102.2	
14	980.0	0.0	0.0	1120.0	76.1	76.1	1260.0	101.5	102.1	
15	1050.0	0.0	0.0	1200.0	73.8	74.4	1350.0	98.2	98.8	
16	1120.0	0.0	0.0	1280.0	73.7	74.3	1440.0	97.1	98.1	
17	1190.0	0.0	0.0	1360.0	67.0	67.6	1530.0	95.7	96.7	
18	1260.0	0.0	0.0	1440.0	66.2	67.2	1620.0	93.0	94.0	
19	1330.0	0.0	0.0	1520.0	62.6	63.6	1710.0	91.3	92.3	
20	1400.0	0.0	0.0	1600.0	60.4	61.4	1800.0	91.6	92.8	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	87.6	88.8	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	87.6	88.8	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	87.0	88.2	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	84.2	85.4	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	82.0	83.3	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	81.3	82.6	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	77.6	78.9	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	78.8	80.1	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	71.1	72.4	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		108.3	92.1	116.7			106.0	121.6		

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
LN-1 / 154				LN-2 / 155			LN-3 / 156			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	106.0	79.8	80.0	115.5	93.0	90.0	112.6	93.5	
2	140.0	101.0	84.9	160.0	107.7	94.3	180.0	109.9	99.0	
3	210.0	92.0	81.1	240.0	105.4	96.8	270.0	110.8	102.2	
4	280.0	93.1	84.5	320.0	106.4	99.8	360.0	110.1	105.3	
5	350.0	87.9	81.3	400.0	99.1	94.3	450.0	102.0	98.8	
6	420.0	79.3	74.5	480.0	94.7	91.5	540.0	108.0	104.8	
7	490.0	76.3	73.1	560.0	96.2	93.0	630.0	104.9	103.0	
8	560.0	73.8	70.6	640.0	90.2	88.3	720.0	99.4	98.6	
9	630.0	66.5	64.6	720.0	79.3	78.5	810.0	102.4	101.6	
10	700.0	57.5	55.6	800.0	85.7	84.9	900.0	98.7	98.7	
11	770.0	0.0	0.0	880.0	80.0	79.2	990.0	93.1	93.1	
12	840.0	0.0	0.0	960.0	74.9	74.9	1080.0	96.8	96.8	
13	910.0	0.0	0.0	1040.0	73.0	73.0	1170.0	92.2	92.8	
14	980.0	0.0	0.0	1120.0	72.1	72.1	1260.0	90.3	90.9	
15	1050.0	0.0	0.0	1200.0	62.3	62.9	1350.0	89.8	90.4	
16	1120.0	0.0	0.0	1280.0	0.0	0.0	1440.0	86.1	87.1	
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	83.8	84.8	
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	80.8	81.8	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	84.4	85.4	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	65.5	66.7	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	0.0	0.0	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		107.5	90.1	117.1		104.2	118.2		112.0	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN											
LN-1 / 154				LN-2 / 155			LN-3 / 156				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	70.0	103.6	77.4	80.0	112.0	89.5	90.0	110.7	91.6		
2	140.0	94.0	77.9	160.0	102.8	89.4	180.0	0.0	0.0		
3	210.0	87.5	76.6	240.0	99.9	91.3	270.0	0.0	0.0		
4	280.0	75.9	67.3	320.0	92.9	86.3	360.0	0.0	0.0		
5	350.0	0.0	0.0	400.0	81.4	76.6	450.0	0.0	0.0		
6	420.0	0.0	0.0	480.0	69.8	66.6	540.0	0.0	0.0		
7	490.0	0.0	0.0	560.0	80.4	77.2	630.0	0.0	0.0		
8	560.0	0.0	0.0	640.0	76.2	74.3	720.0	0.0	0.0		
9	630.0	0.0	0.0	720.0	69.6	68.8	810.0	0.0	0.0		
10	700.0	0.0	0.0	800.0	39.2	38.4	900.0	0.0	0.0		
11	770.0	0.0	0.0	880.0	0.0	0.0	990.0	0.0	0.0		
12	840.0	0.0	0.0	960.0	0.0	0.0	1080.0	0.0	0.0		
13	910.0	0.0	0.0	1040.0	0.0	0.0	1170.0	0.0	0.0		
14	980.0	0.0	0.0	1120.0	0.0	0.0	1260.0	0.0	0.0		
15	1050.0	0.0	0.0	1200.0	0.0	0.0	1350.0	0.0	0.0		
16	1120.0	0.0	0.0	1280.0	0.0	0.0	1440.0	0.0	0.0		
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	0.0	0.0		
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	0.0	0.0		
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	0.0	0.0		
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	0.0	0.0		
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	0.0	0.0		
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0		
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0		
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0		
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0		
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0		
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0		
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0		
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0		
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0		
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0		
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0		
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0		
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0		
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0		
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0		
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0		
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0		
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0		
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0		
OASPL		104.1	82.3			112.7	95.6			110.7	91.6

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 8 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
LN-1 / 154				LN-2 / 155				LN-3 / 156		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	102.7	76.5	80.0	108.5	86.0	90.0	110.5	91.4	
2	140.0	100.6	84.5	160.0	106.7	93.3	180.0	110.2	99.3	
3	210.0	96.0	85.1	240.0	105.1	96.5	270.0	110.4	101.8	
4	280.0	91.5	82.9	320.0	102.0	95.4	360.0	110.2	105.4	
5	350.0	86.3	79.7	400.0	101.1	96.3	450.0	109.7	106.5	
6	420.0	84.7	79.9	480.0	98.2	95.0	540.0	109.0	105.8	
7	490.0	78.9	75.7	560.0	96.4	93.2	630.0	108.3	106.4	
8	560.0	76.4	73.2	640.0	92.2	90.3	720.0	107.3	106.5	
9	630.0	68.0	66.1	720.0	91.5	90.7	810.0	106.6	105.8	
10	700.0	0.0	0.0	800.0	88.6	87.8	900.0	104.4	104.4	
11	770.0	0.0	0.0	880.0	84.7	83.9	990.0	104.3	104.3	
12	840.0	0.0	0.0	960.0	83.3	83.3	1080.0	102.3	102.3	
13	910.0	0.0	0.0	1040.0	79.3	79.3	1170.0	100.9	101.5	
14	980.0	0.0	0.0	1120.0	76.4	76.4	1260.0	99.6	100.2	
15	1050.0	0.0	0.0	1200.0	75.0	75.6	1350.0	98.3	98.9	
16	1120.0	0.0	0.0	1280.0	69.9	70.5	1440.0	96.2	97.2	
17	1190.0	0.0	0.0	1360.0	69.6	70.2	1530.0	94.7	95.7	
18	1260.0	0.0	0.0	1440.0	65.4	66.4	1620.0	93.4	94.4	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	90.9	91.9	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	90.5	91.7	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	88.6	89.8	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	86.8	88.0	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	85.2	86.4	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	84.5	85.7	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	81.1	82.4	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	81.1	82.4	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	79.1	80.4	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	76.5	77.8	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	75.7	77.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	74.7	76.0	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	74.7	76.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	72.9	74.1	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	70.6	71.8	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL	105.6	90.4		112.9	103.8		119.5	115.9		

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
LN-1 / 154				LN-2 / 155			LN-3 / 156			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	102.1	75.9	80.0	110.6	88.1	90.0	108.6	89.5	
2	140.0	100.4	84.3	160.0	105.3	91.9	180.0	106.5	95.6	
3	210.0	91.1	80.2	240.0	101.8	93.2	270.0	113.0	104.4	
4	280.0	94.2	85.6	320.0	104.3	97.7	360.0	110.2	105.4	
5	350.0	88.8	82.2	400.0	99.0	94.2	450.0	109.6	106.4	
6	420.0	79.3	74.5	480.0	96.9	93.7	540.0	109.7	106.5	
7	490.0	78.8	75.6	560.0	96.6	93.4	630.0	108.2	106.3	
8	560.0	75.1	71.9	640.0	92.3	90.4	720.0	106.4	105.6	
9	630.0	72.3	70.4	720.0	89.2	88.4	810.0	107.3	106.5	
10	700.0	67.7	65.8	800.0	88.3	87.5	900.0	103.6	103.6	
11	770.0	0.0	0.0	880.0	85.5	84.7	990.0	102.3	102.3	
12	840.0	0.0	0.0	960.0	80.7	80.7	1080.0	103.9	103.9	
13	910.0	0.0	0.0	1040.0	81.6	81.6	1170.0	101.7	102.3	
14	980.0	0.0	0.0	1120.0	74.6	74.6	1260.0	98.6	99.2	
15	1050.0	0.0	0.0	1200.0	0.0	0.0	1350.0	99.6	100.2	
16	1120.0	0.0	0.0	1280.0	0.0	0.0	1440.0	97.4	98.4	
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	94.7	95.7	
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	93.7	94.7	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	91.5	92.5	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	90.3	91.5	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	89.3	90.5	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	85.1	86.3	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	85.7	86.9	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	86.0	87.2	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	78.1	79.4	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	81.0	82.3	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	78.7	80.0	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	76.3	77.6	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	77.1	78.4	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	74.4	75.7	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	73.8	75.1	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	74.6	75.8	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	71.7	72.9	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	68.8	70.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	69.5	70.7	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	68.5	69.7	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	62.9	64.1	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		105.1	90.2				113.3	103.0		
								119.4	116.0	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
LN-4 / 157				LN-5 / 158			LN-6 / 159				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	95.9	69.7	70.0	102.1	75.9	80.0	107.5	85.0		
2	120.0	84.7	68.6	140.0	92.5	76.4	160.0	102.3	88.9		
3	180.0	77.9	67.0	210.0	90.3	79.4	240.0	99.2	90.6		
4	240.0	74.0	65.4	280.0	82.6	74.0	320.0	95.1	88.5		
5	300.0	60.0	53.4	350.0	78.7	72.1	400.0	92.3	87.5		
6	360.0	0.0	0.0	420.0	72.6	67.8	480.0	85.3	82.1		
7	420.0	0.0	0.0	490.0	68.9	65.7	560.0	75.3	72.1		
8	480.0	0.0	0.0	560.0	55.6	52.4	640.0	74.5	72.6		
9	540.0	0.0	0.0	630.0	0.0	0.0	720.0	76.1	75.3		
10	600.0	0.0	0.0	700.0	0.0	0.0	800.0	70.5	69.7		
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	59.2	58.4		
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	0.0	0.0		
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	0.0	0.0		
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	0.0	0.0		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		96.3	74.0			102.9	83.5			109.4	95.8

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
LN-4 / 157				LN-5 / 158				LN-6 / 159		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	97.3	71.1	70.0	105.7	79.5	80.0	106.3	83.8	
2	120.0	93.7	77.6	140.0	102.9	86.8	160.0	107.2	93.8	
3	180.0	87.8	76.9	210.0	97.0	86.1	240.0	103.5	94.9	
4	240.0	79.7	71.1	280.0	93.6	85.0	320.0	99.8	93.2	
5	300.0	72.5	65.9	350.0	88.1	81.5	400.0	98.1	93.3	
6	360.0	62.1	57.3	420.0	81.0	76.2	480.0	97.0	93.8	
7	420.0	0.0	0.0	490.0	79.2	76.0	560.0	93.8	90.6	
8	480.0	0.0	0.0	560.0	73.2	70.0	640.0	88.5	86.6	
9	540.0	0.0	0.0	630.0	62.2	60.3	720.0	84.9	84.1	
10	600.0	0.0	0.0	700.0	0.0	0.0	800.0	82.8	82.0	
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	79.2	78.4	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	73.9	73.9	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	69.2	69.2	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	69.6	69.6	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	64.2	64.8	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1330.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		99.2	81.3	108.1		91.8	111.5		101.6	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
LN-4 / 157				LN-5 / 158			LN-6 / 159			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	100.5	74.3	70.0	107.5	81.3	80.0	108.1	85.6	
2	120.0	95.7	79.6	140.0	104.7	88.6	160.0	107.6	94.2	
3	180.0	88.1	77.2	210.0	99.0	88.1	240.0	105.8	97.2	
4	240.0	81.5	72.9	280.0	94.4	85.8	320.0	102.8	96.2	
5	300.0	75.3	68.7	350.0	90.1	83.5	400.0	102.5	97.7	
6	360.0	69.2	64.4	420.0	88.1	83.3	480.0	100.1	96.9	
7	420.0	0.0	0.0	490.0	81.1	77.9	560.0	94.2	91.0	
8	480.0	0.0	0.0	560.0	71.8	68.6	640.0	95.1	93.2	
9	540.0	0.0	0.0	630.0	74.3	72.4	720.0	91.3	90.5	
10	600.0	0.0	0.0	700.0	70.2	68.3	800.0	88.7	87.9	
11	660.0	0.0	0.0	770.0	58.8	58.0	880.0	83.4	82.6	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	83.3	83.3	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	80.0	80.0	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	75.8	75.8	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	74.0	74.6	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	76.2	76.8	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	72.1	72.7	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	70.5	71.5	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	67.7	68.7	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	66.8	67.8	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	66.6	67.6	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	64.2	65.2	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		102.0	83.0		110.0	93.8		113.3	104.6	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
LN-4 / 157				LN-5 / 158			LN-6 / 159				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	102.6	76.4	70.0	109.0	82.8	80.0	111.3	88.8		
2	120.0	97.1	81.0	140.0	105.6	89.5	160.0	107.9	94.5		
3	180.0	89.3	78.4	210.0	99.2	88.3	240.0	107.9	99.3		
4	240.0	83.0	74.4	280.0	97.4	88.8	320.0	105.5	98.9		
5	300.0	76.4	69.8	350.0	92.6	86.0	400.0	102.5	97.7		
6	360.0	74.1	69.3	420.0	88.1	83.3	480.0	100.3	97.1		
7	420.0	67.2	62.4	490.0	82.3	79.1	560.0	99.7	96.5		
8	480.0	63.0	59.8	560.0	80.6	77.4	640.0	96.8	94.9		
9	540.0	0.0	0.0	630.0	75.4	73.5	720.0	93.4	92.6		
10	600.0	0.0	0.0	700.0	68.2	66.3	800.0	90.9	90.1		
11	660.0	0.0	0.0	770.0	65.5	64.7	880.0	89.2	88.4		
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	83.7	83.7		
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	83.2	83.2		
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	81.5	81.5		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	77.3	77.9		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	71.2	71.8		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	72.3	72.9		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	68.2	69.2		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	59.2	60.2		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		103.9	84.6			111.2	95.2			115.3	106.3

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
LN-4 / 157				LN-5 / 158				LN-6 / 159		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	103.5	77.3	70.0	110.3	84.1	80.0	114.8	92.3	
2	120.0	97.7	81.6	140.0	106.6	90.5	160.0	109.7	96.3	
3	180.0	88.6	77.7	210.0	97.5	86.6	240.0	106.9	98.3	
4	240.0	78.8	70.2	280.0	97.6	89.0	320.0	109.2	102.6	
5	300.0	77.5	70.9	350.0	95.8	89.2	400.0	104.7	99.9	
6	360.0	72.3	67.5	420.0	87.5	82.7	480.0	97.2	94.0	
7	420.0	71.5	66.7	490.0	83.1	79.9	560.0	99.4	96.2	
8	480.0	63.2	60.0	560.0	79.6	76.4	640.0	98.5	96.6	
9	540.0	0.0	0.0	630.0	76.7	74.8	720.0	92.7	91.9	
10	600.0	0.0	0.0	700.0	70.4	68.5	800.0	89.8	89.0	
11	660.0	0.0	0.0	770.0	53.9	53.1	880.0	85.9	85.1	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	85.8	85.8	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	82.9	82.9	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	77.6	77.6	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	77.2	77.8	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	76.0	76.6	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	69.0	69.6	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	67.3	68.3	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		104.7	84.7		112.3	95.8		117.7	107.4	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
LN-4 / 157				LN-5 / 158				LN-6 / 159		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	103.3	77.1	70.0	111.1	84.9	80.0	116.7	94.2	
2	120.0	95.9	79.8	140.0	106.4	90.3	160.0	108.4	95.0	
3	180.0	87.2	76.3	210.0	97.5	86.6	240.0	106.4	97.8	
4	240.0	80.6	72.0	280.0	96.9	88.3	320.0	108.1	101.5	
5	300.0	77.0	70.4	350.0	93.2	86.6	400.0	100.0	95.2	
6	360.0	72.2	67.4	420.0	79.9	75.1	480.0	95.3	92.1	
7	420.0	66.8	62.0	490.0	74.9	71.7	560.0	97.4	94.2	
8	480.0	66.3	63.1	560.0	78.0	74.8	640.0	92.1	90.2	
9	540.0	53.1	49.9	630.0	72.6	70.7	720.0	79.9	79.1	
10	600.0	0.0	0.0	700.0	51.0	49.1	800.0	87.6	86.8	
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	81.8	81.0	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	75.2	75.2	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	0.0	0.0	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	0.0	0.0	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		104.1	83.5	112.6		94.8	118.3		105.5	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

AD-A174 980	DFVLR/FAR (DEUTSCHE FORSCHUNGS-UND VERSUCHSANSTALT FUER LUFT UND RAUMFAHR. (U) DEUTSCHE FORSCHUNGS- UND VERSUCHSANSTALT FUER LUFT- UND RAUMF..	6/6
UNCLASSIFIED	M M DOBRZYNSKI ET AL. 1986	F/G 20/1 NL

UNCLASSIFIED

W. M. DOBRZYNSKI ET AL. 1986

F/G 20/1

NL

TABLE
I

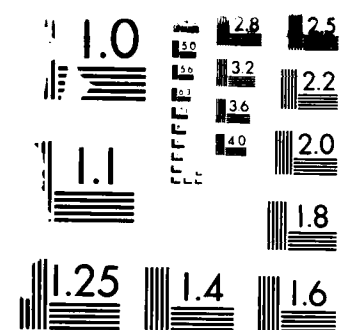


FIG. 1. RESOLUTION TEST CHART
NBS 1010-A

DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
LN-4 / 157				LN-5 / 158			LN-6 / 159				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	98.3	72.1	70.0	110.3	84.1	80.0	114.5	92.0		
2	120.0	89.2	73.1	140.0	99.3	83.2	160.0	102.8	89.4		
3	180.0	77.0	66.1	210.0	93.3	82.4	240.0	100.0	91.4		
4	240.0	70.5	61.9	280.0	80.6	72.0	320.0	94.0	87.4		
5	300.0	60.9	54.3	350.0	76.1	69.5	400.0	85.7	80.9		
6	360.0	0.0	0.0	420.0	69.4	64.6	480.0	75.4	72.2		
7	420.0	0.0	0.0	490.0	0.0	0.0	560.0	0.0	0.0		
8	480.0	0.0	0.0	560.0	0.0	0.0	640.0	0.0	0.0		
9	540.0	0.0	0.0	630.0	0.0	0.0	720.0	0.0	0.0		
10	600.0	0.0	0.0	700.0	0.0	0.0	800.0	0.0	0.0		
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	0.0	0.0		
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	0.0	0.0		
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	0.0	0.0		
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	0.0	0.0		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		98.8	76.3			110.7	88.2			115.0	96.5

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 8 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
LN-4 / 157				LN-5 / 158			LN-6 / 159				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	102.7	76.5	70.0	107.3	81.1	80.0	109.7	87.2		
2	120.0	0.0	0.0	140.0	105.1	89.0	160.0	107.5	94.1		
3	180.0	0.0	0.0	210.0	99.5	88.6	240.0	107.0	98.4		
4	240.0	0.0	0.0	280.0	94.9	86.3	320.0	103.1	96.5		
5	300.0	0.0	0.0	350.0	88.2	81.6	400.0	102.3	97.5		
6	360.0	0.0	0.0	420.0	86.1	81.3	480.0	99.4	96.2		
7	420.0	0.0	0.0	490.0	81.1	77.9	560.0	97.1	93.9		
8	480.0	0.0	0.0	560.0	79.5	76.3	640.0	94.8	92.9		
9	540.0	0.0	0.0	630.0	74.2	72.3	720.0	92.0	91.2		
10	600.0	0.0	0.0	700.0	69.1	67.2	800.0	90.3	89.5		
11	660.0	0.0	0.0	770.0	64.3	63.5	880.0	87.7	86.9		
12	720.0	0.0	0.0	840.0	60.6	59.8	960.0	84.4	84.4		
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	82.3	82.3		
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	78.7	78.7		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	75.9	76.5		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	76.1	76.7		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	68.9	69.5		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		102.7	76.5			110.0	93.9			114.1	105.0

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
LN-4 / 157				LN-5 / 158			LN-6 / 159				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	104.6	78.4	70.0	106.2	80.0	80.0	110.9	88.4		
2	120.0	94.5	78.4	140.0	104.1	88.0	160.0	105.7	92.3		
3	180.0	87.9	77.0	210.0	94.6	83.7	240.0	103.7	95.1		
4	240.0	79.6	71.0	280.0	97.2	88.6	320.0	105.1	98.5		
5	300.0	77.6	71.0	350.0	91.6	85.0	400.0	99.5	94.7		
6	360.0	73.7	68.9	420.0	84.6	79.8	480.0	98.4	95.2		
7	420.0	61.8	57.0	490.0	80.7	77.5	560.0	98.8	95.6		
8	480.0	0.0	0.0	560.0	78.5	75.3	640.0	94.1	92.2		
9	540.0	0.0	0.0	630.0	75.6	73.7	720.0	91.1	90.3		
10	600.0	0.0	0.0	700.0	66.7	64.8	800.0	90.6	89.8		
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	86.2	85.4		
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	82.0	82.0		
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	83.6	83.6		
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	80.3	80.3		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	78.2	78.8		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	70.2	70.8		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		105.1	83.5			108.9	93.4			113.9	104.4

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
FN-1 / 166				FN-2 / 167			FN-3 / 168			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	101.9	75.7	80.0	106.2	83.7	90.0	112.0	92.9	
2	140.0	95.6	79.5	160.0	105.3	91.9	180.0	110.0	99.1	
3	210.0	93.0	82.1	240.0	103.1	94.5	270.0	111.3	102.7	
4	280.0	87.3	78.7	320.0	99.7	93.1	360.0	109.8	105.0	
5	350.0	83.2	76.6	400.0	98.1	93.3	450.0	107.8	104.6	
6	420.0	79.0	74.2	480.0	91.5	88.3	540.0	105.9	102.7	
7	490.0	72.9	69.7	560.0	87.6	84.4	630.0	105.8	103.9	
8	560.0	65.6	62.4	640.0	87.5	85.6	720.0	104.2	103.4	
9	630.0	57.7	55.8	720.0	83.1	82.3	810.0	101.9	101.1	
10	700.0	57.1	55.2	800.0	80.8	80.0	900.0	101.2	101.2	
11	770.0	0.0	0.0	880.0	75.0	74.2	990.0	99.7	99.7	
12	840.0	0.0	0.0	960.0	72.0	72.0	1080.0	95.7	95.7	
13	910.0	0.0	0.0	1040.0	70.8	70.8	1170.0	93.3	93.9	
14	980.0	0.0	0.0	1120.0	63.8	63.8	1260.0	91.7	92.3	
15	1050.0	0.0	0.0	1200.0	56.3	56.9	1350.0	89.2	89.8	
16	1120.0	0.0	0.0	1280.0	53.7	54.3	1440.0	85.0	86.0	
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	88.3	89.3	
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	83.7	84.7	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	77.8	78.8	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	80.9	82.1	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	78.2	79.4	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	75.6	76.8	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	71.9	73.1	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	70.8	72.0	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		103.4	86.5	110.6		100.2	118.5		113.0	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN											
FN-1 / 166				FN-2 / 167			FN-3 / 168				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	70.0	105.7	79.5	80.0	109.0	86.5	90.0	113.5	94.4		
2	140.0	101.5	85.4	160.0	108.8	95.4	180.0	118.4	107.5		
3	210.0	97.7	86.8	240.0	106.1	97.5	270.0	111.6	103.0		
4	280.0	93.8	85.2	320.0	102.2	95.6	360.0	113.6	108.8		
5	350.0	87.8	81.2	400.0	101.5	96.7	450.0	114.1	110.9		
6	420.0	85.0	80.2	480.0	101.7	98.5	540.0	114.2	111.0		
7	490.0	83.4	80.2	560.0	98.5	95.3	630.0	112.3	110.4		
8	560.0	79.1	75.9	640.0	94.9	93.0	720.0	109.5	108.7		
9	630.0	71.8	69.9	720.0	91.0	90.2	810.0	110.5	109.7		
10	700.0	68.1	66.2	800.0	90.2	89.4	900.0	110.5	110.5		
11	770.0	65.3	64.5	880.0	88.9	88.1	990.0	107.7	107.7		
12	840.0	0.0	0.0	960.0	84.9	84.9	1080.0	106.4	106.4		
13	910.0	0.0	0.0	1040.0	80.6	80.6	1170.0	106.2	106.8		
14	980.0	0.0	0.0	1120.0	78.5	78.5	1260.0	105.1	105.7		
15	1050.0	0.0	0.0	1200.0	76.5	77.1	1350.0	103.5	104.1		
16	1120.0	0.0	0.0	1280.0	73.4	74.0	1440.0	101.5	102.5		
17	1190.0	0.0	0.0	1360.0	69.6	70.2	1530.0	100.2	101.2		
18	1260.0	0.0	0.0	1440.0	64.7	65.7	1620.0	99.7	100.7		
19	1330.0	0.0	0.0	1520.0	63.9	64.9	1710.0	97.8	98.8		
20	1400.0	0.0	0.0	1600.0	60.3	61.3	1800.0	95.5	96.7		
21	1470.0	0.0	0.0	1680.0	57.6	58.6	1890.0	94.2	95.4		
22	1540.0	0.0	0.0	1760.0	54.8	55.8	1980.0	94.5	95.7		
23	1610.0	0.0	0.0	1840.0	44.4	45.6	2070.0	91.8	93.0		
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	90.1	91.3		
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	89.4	90.7		
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	88.7	90.0		
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	87.2	88.5		
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	85.3	86.6		
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	86.1	87.4		
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	84.8	86.1		
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	82.4	83.7		
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	81.3	82.5		
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	81.1	82.3		
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	81.1	82.3		
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	78.8	80.0		
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	76.7	77.9		
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	77.0	78.2		
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	75.5	76.7		
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	73.9	75.1		
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	72.3	73.3		
OASPL		107.8	92.1			114.1	105.2			124.0	120.3

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN											
FN-1 / 166				FN-2 / 167				FN-3 / 168			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	70.0	107.3	81.1	80.0	112.1	89.6	90.0	113.9	94.8		
2	140.0	103.1	87.0	160.0	109.6	96.2	180.0	114.3	103.4		
3	210.0	98.4	87.5	240.0	108.4	99.8	270.0	112.9	104.3		
4	280.0	94.6	86.0	320.0	105.0	98.4	360.0	114.6	109.8		
5	350.0	90.8	84.2	400.0	105.2	100.4	450.0	114.6	111.4		
6	420.0	89.4	84.6	480.0	102.0	98.8	540.0	111.5	108.3		
7	490.0	82.8	79.6	560.0	97.1	93.9	630.0	113.2	111.3		
8	560.0	77.3	74.1	640.0	97.5	95.6	720.0	112.9	112.1		
9	630.0	75.0	73.1	720.0	95.6	94.8	810.0	111.6	110.8		
10	700.0	71.7	69.8	800.0	92.1	91.3	900.0	111.2	111.2		
11	770.0	66.9	66.1	880.0	89.0	88.2	990.0	110.8	110.8		
12	840.0	0.0	0.0	960.0	87.8	87.8	1080.0	108.8	108.8		
13	910.0	0.0	0.0	1040.0	85.4	85.4	1170.0	106.2	106.8		
14	980.0	0.0	0.0	1120.0	80.8	80.8	1260.0	107.7	108.3		
15	1050.0	0.0	0.0	1200.0	79.4	80.0	1350.0	106.0	106.6		
16	1120.0	0.0	0.0	1280.0	79.5	80.1	1440.0	103.5	104.5		
17	1190.0	0.0	0.0	1360.0	77.5	78.1	1530.0	102.7	103.7		
18	1260.0	0.0	0.0	1440.0	74.3	75.3	1620.0	103.4	104.4		
19	1330.0	0.0	0.0	1520.0	73.3	74.3	1710.0	101.2	102.2		
20	1400.0	0.0	0.0	1600.0	72.1	73.1	1800.0	97.5	98.7		
21	1470.0	0.0	0.0	1680.0	70.8	71.8	1890.0	98.0	99.2		
22	1540.0	0.0	0.0	1760.0	69.5	70.5	1980.0	97.8	99.0		
23	1610.0	0.0	0.0	1840.0	68.3	69.5	2070.0	95.0	96.2		
24	1680.0	0.0	0.0	1920.0	67.9	69.1	2160.0	93.7	94.9		
25	1750.0	0.0	0.0	2000.0	65.7	66.9	2250.0	94.6	95.9		
26	1820.0	0.0	0.0	2080.0	65.4	66.6	2340.0	91.9	93.2		
27	1890.0	0.0	0.0	2160.0	66.6	67.8	2430.0	89.7	91.0		
28	1960.0	0.0	0.0	2240.0	65.7	67.0	2520.0	90.3	91.6		
29	2030.0	0.0	0.0	2320.0	66.3	67.6	2610.0	89.9	91.2		
30	2100.0	0.0	0.0	2400.0	65.9	67.2	2700.0	87.9	89.2		
31	2170.0	0.0	0.0	2480.0	65.3	66.6	2790.0	86.6	87.9		
32	2240.0	0.0	0.0	2560.0	65.5	66.8	2880.0	87.1	88.3		
33	2310.0	0.0	0.0	2640.0	64.0	65.3	2970.0	86.5	87.7		
34	2380.0	0.0	0.0	2720.0	64.3	65.6	3060.0	85.4	86.6		
35	2450.0	0.0	0.0	2800.0	63.9	65.2	3150.0	82.1	83.3		
36	2520.0	0.0	0.0	2880.0	63.1	64.3	3240.0	81.8	83.0		
37	2590.0	0.0	0.0	2960.0	63.5	64.7	3330.0	83.4	84.6		
38	2660.0	0.0	0.0	3040.0	63.6	64.8	3420.0	81.0	82.2		
39	2730.0	0.0	0.0	3120.0	62.9	64.1	3510.0	77.6	78.8		
40	2800.0	0.0	0.0	3200.0	61.9	63.1	3600.0	78.7	79.7		
OASPL		109.4	93.6			116.3	107.2			124.1	121.5

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
FN-1 / 166				FN-2 / 167			FN-3 / 168			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	109.2	83.0	80.0	115.2	92.7	90.0	115.9	96.8	
2	140.0	104.5	88.4	160.0	110.0	96.6	180.0	113.5	102.6	
3	210.0	98.8	87.9	240.0	110.1	101.5	270.0	115.3	106.7	
4	280.0	97.1	88.5	320.0	107.4	100.8	360.0	113.9	109.1	
5	350.0	92.0	85.4	400.0	104.3	99.5	450.0	114.3	111.1	
6	420.0	86.5	81.7	480.0	101.9	98.7	540.0	112.0	108.8	
7	490.0	83.0	79.8	560.0	100.1	96.9	630.0	113.8	111.9	
8	560.0	79.9	76.7	640.0	98.5	96.6	720.0	111.4	110.6	
9	630.0	76.9	75.0	720.0	94.8	94.0	810.0	110.9	110.1	
10	700.0	70.9	69.0	800.0	92.9	92.1	900.0	111.0	111.0	
11	770.0	65.5	64.7	880.0	90.7	89.9	990.0	108.9	108.9	
12	840.0	0.0	0.0	960.0	86.7	86.7	1080.0	108.3	108.3	
13	910.0	0.0	0.0	1040.0	85.0	85.0	1170.0	108.0	108.6	
14	980.0	0.0	0.0	1120.0	83.4	83.4	1260.0	105.0	105.6	
15	1050.0	0.0	0.0	1200.0	79.7	80.3	1350.0	104.9	105.5	
16	1120.0	0.0	0.0	1280.0	75.2	75.8	1440.0	104.1	105.1	
17	1190.0	0.0	0.0	1360.0	75.2	75.8	1530.0	101.4	102.4	
18	1260.0	0.0	0.0	1440.0	71.9	72.9	1620.0	99.7	100.7	
19	1330.0	0.0	0.0	1520.0	68.2	69.2	1710.0	100.3	101.3	
20	1400.0	0.0	0.0	1600.0	64.0	65.0	1800.0	98.8	100.0	
21	1470.0	0.0	0.0	1680.0	62.8	63.8	1890.0	95.5	96.7	
22	1540.0	0.0	0.0	1760.0	61.5	62.5	1980.0	95.2	96.4	
23	1610.0	0.0	0.0	1840.0	60.0	61.2	2070.0	94.3	95.5	
24	1680.0	0.0	0.0	1920.0	57.3	58.5	2160.0	90.9	92.1	
25	1750.0	0.0	0.0	2000.0	53.6	54.8	2250.0	91.6	92.9	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	89.8	91.1	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	89.2	90.5	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	88.5	89.8	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	88.3	89.6	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	86.6	87.9	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	85.0	86.3	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	85.3	86.5	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	82.7	83.9	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	81.4	82.6	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	82.0	83.2	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	81.1	82.3	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	78.0	79.2	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	78.8	80.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	77.8	79.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	75.9	76.9	
OASPL		111.0	94.6	118.2		108.1	124.1		121.0	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN											
FN-1 / 166				FN-2 / 167				FN-3 / 168			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	70.0	110.3	84.1	80.0	117.2	94.7	90.0	117.5	98.4		
2	140.0	105.1	89.0	160.0	111.3	97.9	180.0	111.7	100.8		
3	210.0	96.5	85.6	240.0	108.4	99.8	270.0	115.4	106.8		
4	280.0	95.7	87.1	320.0	110.4	103.8	360.0	117.7	112.9		
5	350.0	92.8	86.2	400.0	104.9	100.1	450.0	109.1	105.9		
6	420.0	87.0	82.2	480.0	98.4	95.2	540.0	111.7	108.5		
7	490.0	80.8	77.6	560.0	99.4	96.2	630.0	112.4	110.5		
8	560.0	77.9	74.7	640.0	97.4	95.5	720.0	107.3	106.5		
9	630.0	72.5	70.6	720.0	92.6	91.8	810.0	108.3	107.5		
10	700.0	68.4	66.5	800.0	88.7	87.9	900.0	106.9	106.9		
11	770.0	65.2	64.4	880.0	87.2	86.4	990.0	106.3	106.3		
12	840.0	52.3	51.5	960.0	85.2	85.2	1080.0	103.9	103.9		
13	910.0	0.0	0.0	1040.0	82.7	82.7	1170.0	103.0	103.6		
14	980.0	0.0	0.0	1120.0	77.2	77.2	1260.0	103.0	103.6		
15	1050.0	0.0	0.0	1200.0	75.1	75.7	1350.0	99.7	100.3		
16	1120.0	0.0	0.0	1280.0	74.4	75.0	1440.0	98.9	99.9		
17	1190.0	0.0	0.0	1360.0	66.1	66.7	1530.0	97.0	98.0		
18	1260.0	0.0	0.0	1440.0	65.3	66.3	1620.0	95.2	96.2		
19	1330.0	0.0	0.0	1520.0	61.7	62.7	1710.0	93.2	94.2		
20	1400.0	0.0	0.0	1600.0	62.7	63.7	1800.0	93.2	94.4		
21	1470.0	0.0	0.0	1680.0	57.1	58.1	1890.0	90.8	92.0		
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	89.1	90.3		
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	89.2	90.4		
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	87.4	88.6		
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	83.4	84.7		
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	86.0	87.3		
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	80.8	82.1		
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	82.9	84.2		
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	75.5	76.8		
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	79.6	80.9		
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	78.7	80.0		
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	75.2	76.4		
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	75.0	76.2		
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	76.1	77.3		
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	69.8	71.0		
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	74.0	75.2		
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	71.5	72.7		
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	65.9	67.1		
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	69.2	70.4		
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0		
OASPL		111.8	94.2			119.5	108.3			123.7	119.0

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN											
FN-1 / 166				FN-2 / 167				FN-3 / 168			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	70.0	110.5	84.3	80.0	117.7	95.2	90.0	117.4	98.3		
2	140.0	103.5	87.4	160.0	109.8	96.4	180.0	113.6	102.7		
3	210.0	93.4	82.5	240.0	106.4	97.8	270.0	113.8	105.2		
4	280.0	93.8	85.2	320.0	106.6	100.0	360.0	112.1	107.3		
5	350.0	88.3	81.7	400.0	99.4	94.6	450.0	102.6	99.4		
6	420.0	75.8	71.0	480.0	94.4	91.2	540.0	109.0	105.8		
7	490.0	73.7	70.5	560.0	95.3	92.1	630.0	104.4	102.5		
8	560.0	73.5	70.3	640.0	88.7	86.8	720.0	96.6	95.8		
9	630.0	65.4	63.5	720.0	72.2	71.4	810.0	102.5	101.7		
10	700.0	0.0	0.0	800.0	83.8	83.0	900.0	97.2	97.2		
11	770.0	0.0	0.0	880.0	76.7	75.9	990.0	90.4	90.4		
12	840.0	0.0	0.0	960.0	71.0	71.0	1080.0	95.2	95.2		
13	910.0	0.0	0.0	1040.0	70.0	70.0	1170.0	87.6	88.2		
14	980.0	0.0	0.0	1120.0	64.1	64.1	1260.0	87.5	88.1		
15	1050.0	0.0	0.0	1200.0	53.2	53.8	1350.0	87.2	87.8		
16	1120.0	0.0	0.0	1280.0	0.0	0.0	1440.0	82.7	83.7		
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	80.8	81.8		
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	78.7	79.7		
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	82.3	83.3		
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	70.0	71.2		
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	0.0	0.0		
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0		
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0		
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0		
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0		
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0		
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0		
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0		
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0		
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0		
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0		
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0		
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0		
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0		
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0		
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0		
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0		
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0		
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0		
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0		
OASPL		111.4	91.8			119.0	104.8			121.3	113.2

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
FN-1 / 166				FN-2 / 167				FN-3 / 168		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	107.9	81.7	80.0	113.6	91.1	90.0	115.5	96.4	
2	140.0	95.6	79.5	160.0	103.4	90.0	180.0	0.0	0.0	
3	210.0	86.8	75.9	240.0	100.5	91.9	270.0	0.0	0.0	
4	280.0	71.0	62.4	320.0	89.7	83.1	360.0	0.0	0.0	
5	350.0	75.1	68.5	400.0	85.4	80.6	450.0	0.0	0.0	
6	420.0	71.1	66.3	480.0	80.5	77.3	540.0	0.0	0.0	
7	490.0	62.6	59.4	560.0	80.2	77.0	630.0	0.0	0.0	
8	560.0	0.0	0.0	640.0	75.9	74.0	720.0	0.0	0.0	
9	630.0	0.0	0.0	720.0	72.8	72.0	810.0	0.0	0.0	
10	700.0	0.0	0.0	800.0	66.4	65.6	900.0	0.0	0.0	
11	770.0	0.0	0.0	880.0	0.0	0.0	990.0	0.0	0.0	
12	840.0	0.0	0.0	960.0	0.0	0.0	1080.0	0.0	0.0	
13	910.0	0.0	0.0	1040.0	0.0	0.0	1170.0	0.0	0.0	
14	980.0	0.0	0.0	1120.0	0.0	0.0	1260.0	0.0	0.0	
15	1050.0	0.0	0.0	1200.0	0.0	0.0	1350.0	0.0	0.0	
16	1120.0	0.0	0.0	1280.0	0.0	0.0	1440.0	0.0	0.0	
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	0.0	0.0	
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	0.0	0.0	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	0.0	0.0	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	0.0	0.0	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	0.0	0.0	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		108.2	84.6	114.2		96.3	115.5		96.4	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 8 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
FN-1 / 166				FN-2 / 167			FN-3 / 168			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	105.4	79.2	80.0	111.6	89.1	90.0	110.0	90.9	
2	140.0	103.4	87.3	160.0	108.5	95.1	180.0	112.4	101.5	
3	210.0	98.9	88.0	240.0	107.9	99.3	270.0	112.3	103.7	
4	280.0	94.6	86.0	320.0	104.9	98.3	360.0	112.0	107.2	
5	350.0	90.0	83.4	400.0	102.9	98.1	450.0	111.9	108.7	
6	420.0	86.2	81.4	480.0	100.1	96.9	540.0	111.7	108.5	
7	490.0	82.2	79.0	560.0	97.9	94.7	630.0	111.4	109.5	
8	560.0	77.9	74.7	640.0	95.8	93.9	720.0	110.3	109.5	
9	630.0	74.6	72.7	720.0	94.0	93.2	810.0	109.6	108.8	
10	700.0	71.2	69.3	800.0	91.2	90.4	900.0	107.5	107.5	
11	770.0	65.9	65.1	880.0	88.3	87.5	990.0	107.5	107.5	
12	840.0	0.0	0.0	960.0	85.6	85.6	1080.0	105.8	105.8	
13	910.0	0.0	0.0	1040.0	82.9	82.9	1170.0	105.0	105.6	
14	980.0	0.0	0.0	1120.0	80.8	80.8	1260.0	103.4	104.0	
15	1050.0	0.0	0.0	1200.0	77.3	77.9	1350.0	102.6	103.2	
16	1120.0	0.0	0.0	1280.0	75.7	76.3	1440.0	100.9	101.9	
17	1190.0	0.0	0.0	1360.0	71.6	72.2	1530.0	99.2	100.2	
18	1260.0	0.0	0.0	1440.0	70.0	71.0	1620.0	98.2	99.2	
19	1330.0	0.0	0.0	1520.0	66.1	67.1	1710.0	96.7	97.7	
20	1400.0	0.0	0.0	1600.0	61.2	62.2	1800.0	95.6	96.8	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	94.7	95.9	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	92.7	93.9	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	91.8	93.0	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	90.0	91.2	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	87.9	89.2	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	87.3	88.6	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	86.0	87.3	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	84.6	85.9	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	84.2	85.5	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	83.6	84.9	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	81.2	82.5	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	81.5	82.7	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	80.0	81.2	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	79.1	80.3	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	78.6	79.8	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	76.6	77.8	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	75.6	76.8	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	75.4	76.6	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	71.7	72.9	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	72.0	73.0	
OASPL		108.4	93.3				115.5	106.1		

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN											
FN-1 / 166				FN-2 / 167				FN-3 / 168			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	70.0	106.2	80.0	80.0	113.4	90.9	90.0	113.4	94.3		
2	140.0	102.8	86.7	160.0	107.8	94.4	180.0	108.7	97.8		
3	210.0	92.5	81.6	240.0	106.4	97.8	270.0	115.4	106.8		
4	280.0	97.0	88.4	320.0	107.3	100.7	360.0	112.9	108.1		
5	350.0	91.8	85.2	400.0	100.3	95.5	450.0	110.1	106.9		
6	420.0	83.2	78.4	480.0	99.6	96.4	540.0	112.9	109.7		
7	490.0	79.3	76.1	560.0	99.9	96.7	630.0	109.0	107.1		
8	560.0	80.1	76.9	640.0	94.8	92.9	720.0	109.1	108.3		
9	630.0	75.2	73.3	720.0	90.0	89.2	810.0	110.5	109.7		
10	700.0	68.1	66.2	800.0	91.9	91.1	900.0	105.3	105.3		
11	770.0	0.0	0.0	880.0	87.1	86.3	990.0	106.4	106.4		
12	840.0	0.0	0.0	960.0	82.4	82.4	1080.0	106.6	106.6		
13	910.0	0.0	0.0	1040.0	84.3	84.3	1170.0	104.3	104.9		
14	980.0	0.0	0.0	1120.0	79.3	79.3	1260.0	102.0	102.6		
15	1050.0	0.0	0.0	1200.0	77.9	78.5	1350.0	103.2	103.8		
16	1120.0	0.0	0.0	1280.0	73.4	74.0	1440.0	101.3	102.3		
17	1190.0	0.0	0.0	1360.0	70.9	71.5	1530.0	97.7	98.7		
18	1260.0	0.0	0.0	1440.0	69.9	70.9	1620.0	99.1	100.1		
19	1330.0	0.0	0.0	1520.0	64.1	65.1	1710.0	96.2	97.2		
20	1400.0	0.0	0.0	1600.0	61.6	62.6	1800.0	95.0	96.2		
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	95.5	96.7		
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	91.2	92.4		
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	92.1	93.3		
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	92.6	93.8		
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	82.1	83.4		
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	89.9	91.2		
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	87.0	88.3		
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	85.7	86.9		
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	85.0	86.2		
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	82.5	83.7		
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	82.0	83.2		
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	82.0	83.2		
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	80.1	81.2		
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	79.5	80.6		
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	79.4	80.5		
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	79.4	80.5		
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	73.7	74.9		
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	78.2	79.4		
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	75.9	77.1		
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	68.2	69.2		
OASPL		108.4	92.8			116.1	106.0			122.1	118.6

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
FN-4 / 169				FN-5 / 170			FN-6 / 171			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	101.7	75.5	70.0	105.9	79.7	80.0	109.0	86.5	
2	120.0	90.7	74.6	140.0	98.0	81.9	160.0	106.2	92.8	
3	180.0	82.7	71.8	210.0	94.7	83.8	240.0	104.5	95.9	
4	240.0	75.1	66.5	280.0	90.0	81.4	320.0	100.5	93.9	
5	300.0	76.1	69.5	350.0	84.1	77.5	400.0	99.3	94.5	
6	360.0	59.4	54.6	420.0	79.7	74.9	480.0	94.4	91.2	
7	420.0	0.0	0.0	490.0	76.5	73.3	560.0	90.3	87.1	
8	480.0	0.0	0.0	560.0	62.6	59.4	640.0	87.7	85.8	
9	540.0	0.0	0.0	630.0	0.0	0.0	720.0	86.6	85.8	
10	600.0	0.0	0.0	700.0	0.0	0.0	800.0	76.0	75.2	
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	80.0	79.2	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	74.5	74.5	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	72.1	72.1	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	67.7	67.7	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	60.1	60.7	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		102.1	79.7		107.0	88.7		112.4	101.6	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
FN-4 / 169				FN-5 / 170			FN-6 / 171				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	103.6	77.4	70.0	109.0	82.8	80.0	110.6	88.1		
2	120.0	97.6	81.5	140.0	104.1	88.0	160.0	110.6	97.2		
3	180.0	92.1	81.2	210.0	100.7	89.8	240.0	107.9	99.3		
4	240.0	84.4	75.8	280.0	95.8	87.2	320.0	104.5	97.9		
5	300.0	78.4	71.8	350.0	91.1	84.5	400.0	103.7	98.9		
6	360.0	71.9	67.1	420.0	87.9	83.1	480.0	102.7	99.5		
7	420.0	67.8	63.0	490.0	83.9	80.7	560.0	99.9	96.7		
8	480.0	53.6	50.4	560.0	80.4	77.2	640.0	96.3	94.4		
9	540.0	0.0	0.0	630.0	72.0	70.1	720.0	93.5	92.7		
10	600.0	0.0	0.0	700.0	67.4	65.5	800.0	91.6	90.8		
11	660.0	0.0	0.0	770.0	69.0	68.2	880.0	90.9	90.1		
12	720.0	0.0	0.0	840.0	60.0	59.2	960.0	86.5	86.5		
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	83.5	83.5		
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	81.5	81.5		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	79.2	79.8		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	76.8	77.4		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	71.6	72.2		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	68.8	69.8		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	68.2	69.2		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	65.6	66.6		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	60.8	61.8		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		104.9	85.9			110.9	94.7			115.8	107.0

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
FN-4 / 169				FN-5 / 170				FN-6 / 171			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	105.3	79.1	70.0	110.7	84.5	80.0	113.3	90.8		
2	120.0	98.6	82.5	140.0	106.5	90.4	160.0	111.3	97.9		
3	180.0	92.0	81.1	210.0	102.0	91.1	240.0	110.5	101.9		
4	240.0	85.8	77.2	280.0	97.2	88.6	320.0	106.7	100.1		
5	300.0	81.9	75.3	350.0	94.4	87.8	400.0	107.4	102.6		
6	360.0	74.3	69.5	420.0	91.0	86.2	480.0	104.0	100.8		
7	420.0	72.3	67.5	490.0	86.6	83.4	560.0	99.8	96.6		
8	480.0	68.1	64.9	560.0	79.2	76.0	640.0	99.8	97.9		
9	540.0	59.0	55.8	630.0	79.3	77.4	720.0	97.6	96.8		
10	600.0	0.0	0.0	700.0	72.3	70.4	800.0	94.6	93.8		
11	660.0	0.0	0.0	770.0	70.3	69.5	880.0	92.3	91.5		
12	720.0	0.0	0.0	840.0	66.5	65.7	960.0	90.6	90.6		
13	780.0	0.0	0.0	910.0	60.7	60.7	1040.0	88.4	88.4		
14	840.0	0.0	0.0	980.0	62.4	62.4	1120.0	83.1	83.1		
15	900.0	0.0	0.0	1050.0	51.4	51.4	1200.0	82.4	83.0		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	81.0	81.6		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	77.7	78.3		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	72.2	73.2		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	71.1	72.1		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	66.3	67.3		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	66.5	67.5		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	59.1	60.1		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		106.3	86.9			112.7	96.8			117.9	109.3

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
FN-4 / 169				FN-5 / 170			FN-6 / 171			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	106.8	80.6	70.0	112.4	86.2	80.0	116.3	93.8	
2	120.0	99.6	83.5	140.0	108.2	92.1	160.0	111.6	98.2	
3	180.0	92.8	81.9	210.0	102.1	91.2	240.0	112.1	103.5	
4	240.0	85.5	76.9	280.0	101.0	92.4	320.0	109.1	102.5	
5	300.0	82.9	76.3	350.0	93.3	86.7	400.0	105.8	101.0	
6	360.0	74.0	69.2	420.0	92.2	87.4	480.0	103.9	100.7	
7	420.0	59.9	55.1	490.0	83.8	80.6	560.0	102.3	99.1	
8	480.0	0.0	0.0	560.0	83.3	80.1	640.0	99.7	97.8	
9	540.0	0.0	0.0	630.0	76.7	74.8	720.0	96.7	95.9	
10	600.0	0.0	0.0	700.0	74.4	72.5	800.0	94.9	94.1	
11	660.0	0.0	0.0	770.0	62.9	62.1	880.0	92.2	91.4	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	88.9	88.9	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	87.6	87.6	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	85.0	85.0	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	81.7	82.3	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	77.9	78.5	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	77.5	78.1	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	72.7	73.7	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	70.0	71.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	64.0	65.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		107.8	87.7	114.3		98.1	119.6		109.9	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
FN-4 / 169				FN-5 / 170			FN-6 / 171			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	107.5	81.3	70.0	113.8	87.6	80.0	118.6	96.1	
2	120.0	100.5	84.4	140.0	109.9	93.8	160.0	112.8	99.4	
3	180.0	90.5	79.6	210.0	100.3	89.4	240.0	110.1	101.5	
4	240.0	81.6	73.0	280.0	99.6	91.0	320.0	112.3	105.7	
5	300.0	77.9	71.3	350.0	98.1	91.5	400.0	106.7	101.9	
6	360.0	75.3	70.5	420.0	87.1	82.3	480.0	99.9	96.7	
7	420.0	72.6	67.8	490.0	84.5	81.3	560.0	101.0	97.8	
8	480.0	63.4	60.2	560.0	79.7	76.5	640.0	100.0	98.1	
9	540.0	0.0	0.0	630.0	77.6	75.7	720.0	94.2	93.4	
10	600.0	0.0	0.0	700.0	68.6	66.7	800.0	89.8	89.0	
11	660.0	0.0	0.0	770.0	71.2	70.4	880.0	88.1	87.3	
12	720.0	0.0	0.0	840.0	64.4	63.6	960.0	87.8	87.8	
13	780.0	0.0	0.0	910.0	61.8	61.8	1040.0	85.2	85.2	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	77.5	77.5	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	79.1	79.7	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	77.0	77.6	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	68.8	69.4	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		108.4	87.4	115.6		98.4	121.1		110.1	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
FN-4 / 169				FN-5 / 170				FN-6 / 171			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	106.9	80.7	70.0	114.6	88.4	80.0	119.4	96.9		
2	120.0	99.8	83.7	140.0	108.4	92.3	160.0	111.3	97.9		
3	180.0	88.7	77.8	210.0	98.6	87.7	240.0	108.9	100.3		
4	240.0	79.3	70.7	280.0	97.3	88.7	320.0	108.5	101.9		
5	300.0	73.9	67.3	350.0	90.0	83.4	400.0	99.9	95.1		
6	360.0	67.5	62.7	420.0	82.3	77.5	480.0	96.8	93.6		
7	420.0	0.0	0.0	490.0	70.5	67.3	560.0	97.6	94.4		
8	480.0	0.0	0.0	560.0	75.5	72.3	640.0	91.0	89.1		
9	540.0	0.0	0.0	630.0	71.8	69.9	720.0	78.9	78.1		
10	600.0	0.0	0.0	700.0	65.9	64.0	800.0	87.2	86.4		
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	79.3	78.5		
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	68.9	68.9		
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	71.4	71.4		
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	0.0	0.0		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		107.7	86.3	115.7		96.0	120.7		106.7		

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
FN-4 / 169				FN-5 / 170			FN-6 / 171				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	104.3	78.1	70.0	112.8	86.6	80.0	115.4	92.9		
2	120.0	90.3	74.2	140.0	98.9	82.8	160.0	106.0	92.6		
3	180.0	81.9	71.0	210.0	87.7	76.8	240.0	101.4	92.8		
4	240.0	73.5	64.9	280.0	74.2	65.6	320.0	91.2	84.6		
5	300.0	78.4	71.8	350.0	0.0	0.0	400.0	88.9	84.1		
6	360.0	58.7	53.9	420.0	0.0	0.0	480.0	74.8	71.6		
7	420.0	0.0	0.0	490.0	0.0	0.0	560.0	80.4	77.2		
8	480.0	0.0	0.0	560.0	0.0	0.0	640.0	78.9	77.0		
9	540.0	0.0	0.0	630.0	0.0	0.0	720.0	65.7	64.9		
10	600.0	0.0	0.0	700.0	0.0	0.0	800.0	0.0	0.0		
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	0.0	0.0		
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	0.0	0.0		
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	0.0	0.0		
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	0.0	0.0		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		104.5	80.9			113.0	88.4			116.1	98.0

F - FREQUENCY Hz

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 8 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
FN-4 / 169				FN-5 / 170			FN-6 / 171			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	105.2	79.0	70.0	109.5	83.3	80.0	113.1	90.6	
2	120.0	98.2	82.1	140.0	106.8	90.7	160.0	110.3	96.9	
3	180.0	90.4	79.5	210.0	102.2	91.3	240.0	109.3	100.7	
4	240.0	84.5	75.9	280.0	98.5	89.9	320.0	106.2	99.6	
5	300.0	79.6	73.0	350.0	92.4	85.8	400.0	104.7	99.9	
6	360.0	72.1	67.3	420.0	89.1	84.3	480.0	101.7	98.5	
7	420.0	0.0	0.0	490.0	84.0	80.8	560.0	100.0	96.8	
8	480.0	0.0	0.0	560.0	81.8	78.6	640.0	97.5	95.6	
9	540.0	0.0	0.0	630.0	78.0	76.1	720.0	95.6	94.8	
10	600.0	0.0	0.0	700.0	71.4	69.5	800.0	93.6	92.8	
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	89.9	89.1	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	88.1	88.1	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	85.0	85.0	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	83.2	83.2	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	79.5	80.1	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	77.7	78.3	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	75.7	76.3	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	71.1	72.1	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	71.3	72.3	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		106.2	86.0	112.2		96.7	117.0		107.7	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
FN-4 / 169				FN-5 / 170			FN-6 / 171			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	106.1	79.9	70.0	109.8	83.6	80.0	115.1	92.6	
2	120.0	99.0	82.9	140.0	106.6	90.5	160.0	109.9	96.5	
3	180.0	90.7	79.8	210.0	97.1	86.2	240.0	108.5	99.9	
4	240.0	82.1	73.5	280.0	100.4	91.8	320.0	109.1	102.5	
5	300.0	81.7	75.1	350.0	95.2	88.6	400.0	102.7	97.9	
6	360.0	69.1	64.3	420.0	84.9	80.1	480.0	101.3	98.1	
7	420.0	58.3	53.5	490.0	82.7	79.5	560.0	101.8	98.6	
8	480.0	0.0	0.0	560.0	81.1	77.9	640.0	97.1	95.2	
9	540.0	0.0	0.0	630.0	77.5	75.6	720.0	93.7	92.9	
10	600.0	0.0	0.0	700.0	72.9	71.0	800.0	95.0	94.2	
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	89.4	88.6	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	85.6	85.6	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	87.8	87.8	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	82.4	82.4	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	78.0	78.6	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		107.0	86.5	112.1		96.3	118.0		108.1	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
EN-1 / 163							EN-2 / 164			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	104.4	78.2	80.0	107.2	84.7	90.0	113.1	94.0	
2	140.0	97.4	81.3	160.0	106.7	93.3	180.0	112.4	101.5	
3	210.0	95.9	85.0	240.0	105.4	96.8	270.0	113.4	104.8	
4	280.0	90.0	81.4	320.0	102.5	95.9	360.0	113.0	108.2	
5	350.0	85.9	79.3	400.0	101.8	97.0	450.0	111.3	108.1	
6	420.0	81.8	77.0	480.0	95.7	92.5	540.0	110.5	107.3	
7	490.0	76.2	73.0	560.0	91.4	88.2	630.0	110.1	108.2	
8	560.0	73.2	70.0	640.0	91.0	89.1	720.0	108.6	107.8	
9	630.0	66.0	64.1	720.0	89.4	88.6	810.0	107.7	106.9	
10	700.0	0.0	0.0	800.0	86.3	85.5	900.0	107.6	107.6	
11	770.0	0.0	0.0	880.0	80.2	79.4	990.0	106.3	106.3	
12	840.0	0.0	0.0	960.0	79.6	79.6	1080.0	103.5	103.5	
13	910.0	0.0	0.0	1040.0	78.6	78.6	1170.0	101.2	101.8	
14	980.0	0.0	0.0	1120.0	74.1	74.1	1260.0	99.6	100.2	
15	1050.0	0.0	0.0	1200.0	67.2	67.8	1350.0	98.2	98.8	
16	1120.0	0.0	0.0	1280.0	63.5	64.1	1440.0	96.1	97.1	
17	1190.0	0.0	0.0	1360.0	62.1	62.7	1530.0	96.2	97.2	
18	1260.0	0.0	0.0	1440.0	61.2	62.2	1620.0	95.1	96.1	
19	1330.0	0.0	0.0	1520.0	58.4	59.4	1710.0	92.7	93.7	
20	1400.0	0.0	0.0	1600.0	51.6	52.6	1800.0	92.2	93.4	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	90.8	92.0	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	88.4	89.6	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	85.6	86.8	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	84.8	86.0	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	85.6	86.9	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	83.0	84.3	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	82.8	84.1	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	82.8	84.1	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	80.7	82.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	78.6	79.9	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	77.2	78.5	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	78.5	79.7	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	76.4	77.6	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	75.5	76.7	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	74.7	75.9	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	69.6	70.8	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	70.2	71.4	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	68.8	70.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	69.5	70.7	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	68.4	69.4	
OASPL		105.8	89.1				112.4	103.2		

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
EN-1 / 163				EN-2 / 164			EN-3 / 165			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	107.6	81.4	80.0	110.7	88.2	90.0	115.0	95.9	
2	140.0	103.0	86.9	160.0	110.6	97.2	180.0	117.7	106.8	
3	210.0	99.6	88.7	240.0	108.2	99.6	270.0	115.7	107.1	
4	280.0	95.7	87.1	320.0	104.5	97.9	360.0	113.7	108.9	
5	350.0	90.6	84.0	400.0	103.8	99.0	450.0	117.1	113.9	
6	420.0	88.7	83.9	480.0	103.9	100.7	540.0	117.2	114.0	
7	490.0	85.0	81.8	560.0	100.5	97.3	630.0	114.8	112.9	
8	560.0	81.6	78.4	640.0	97.8	95.9	720.0	113.3	112.5	
9	630.0	74.8	72.9	720.0	94.8	94.0	810.0	113.6	112.8	
10	700.0	71.1	69.2	800.0	93.6	92.8	900.0	114.1	114.1	
11	770.0	66.4	65.6	880.0	92.4	91.6	990.0	111.4	111.4	
12	840.0	63.9	63.1	960.0	89.2	89.2	1080.0	110.6	110.6	
13	910.0	0.0	0.0	1040.0	85.1	85.1	1170.0	110.3	110.9	
14	980.0	0.0	0.0	1120.0	83.5	83.5	1260.0	109.6	110.2	
15	1050.0	0.0	0.0	1200.0	81.3	81.9	1350.0	108.1	108.7	
16	1120.0	0.0	0.0	1280.0	79.3	79.9	1440.0	106.8	107.8	
17	1190.0	0.0	0.0	1360.0	76.0	76.6	1530.0	106.1	107.1	
18	1260.0	0.0	0.0	1440.0	73.1	74.1	1620.0	105.5	106.5	
19	1330.0	0.0	0.0	1520.0	70.9	71.9	1710.0	103.9	104.9	
20	1400.0	0.0	0.0	1600.0	68.2	69.2	1800.0	102.0	103.2	
21	1470.0	0.0	0.0	1680.0	64.9	65.9	1890.0	101.4	102.6	
22	1540.0	0.0	0.0	1760.0	61.0	62.0	1980.0	101.8	103.0	
23	1610.0	0.0	0.0	1840.0	57.7	58.9	2070.0	99.7	100.9	
24	1680.0	0.0	0.0	1920.0	52.7	53.9	2160.0	98.7	99.9	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	98.4	99.7	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	98.0	99.3	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	96.7	98.0	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	96.3	97.6	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	96.9	98.2	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	96.0	97.3	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	94.0	95.3	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	93.7	94.9	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	93.8	95.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	93.8	95.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	91.9	93.1	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	91.1	92.3	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	91.1	92.3	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	90.6	91.8	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	89.3	90.5	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	88.8	89.8	
OASPL		109.6	94.2				116.0	107.6		

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN											
EN-1 / 163				EN-2 / 164				EN-3 / 165			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	70.0	109.3	83.1	80.0	114.1	91.6	90.0	115.8	96.7		
2	140.0	104.7	88.6	160.0	111.4	98.0	180.0	116.3	105.4		
3	210.0	100.2	89.3	240.0	110.1	101.5	270.0	113.9	105.3		
4	280.0	96.4	87.8	320.0	107.4	100.8	360.0	116.2	111.4		
5	350.0	92.5	85.9	400.0	107.1	102.3	450.0	116.3	113.1		
6	420.0	90.5	85.7	480.0	103.1	99.9	540.0	113.1	109.9		
7	490.0	85.1	81.9	560.0	98.4	95.2	630.0	115.0	113.1		
8	560.0	80.4	77.2	640.0	98.2	96.3	720.0	115.3	114.5		
9	630.0	77.6	75.7	720.0	95.9	95.1	810.0	113.8	113.0		
10	700.0	73.4	71.5	800.0	92.2	91.4	900.0	113.6	113.6		
11	770.0	66.9	66.1	880.0	88.6	87.8	990.0	113.4	113.4		
12	840.0	65.0	64.2	960.0	89.0	89.0	1080.0	111.2	111.2		
13	910.0	60.0	60.0	1040.0	88.0	88.0	1170.0	109.0	109.6		
14	980.0	0.0	0.0	1120.0	85.6	85.6	1260.0	110.6	111.2		
15	1050.0	0.0	0.0	1200.0	84.9	85.5	1350.0	109.3	109.9		
16	1120.0	0.0	0.0	1280.0	85.9	86.5	1440.0	106.3	107.3		
17	1190.0	0.0	0.0	1360.0	85.3	85.9	1530.0	106.1	107.1		
18	1260.0	0.0	0.0	1440.0	83.7	84.7	1620.0	107.0	108.0		
19	1330.0	0.0	0.0	1520.0	83.4	84.4	1710.0	104.9	105.9		
20	1400.0	0.0	0.0	1600.0	82.9	83.9	1800.0	101.6	102.8		
21	1470.0	0.0	0.0	1680.0	81.7	82.7	1890.0	102.1	103.3		
22	1540.0	0.0	0.0	1760.0	80.6	81.6	1980.0	102.2	103.4		
23	1610.0	0.0	0.0	1840.0	80.0	81.2	2070.0	100.0	101.2		
24	1680.0	0.0	0.0	1920.0	79.5	80.7	2160.0	99.1	100.3		
25	1750.0	0.0	0.0	2000.0	78.9	80.1	2250.0	99.9	101.2		
26	1820.0	0.0	0.0	2080.0	78.3	79.5	2340.0	97.9	99.2		
27	1890.0	0.0	0.0	2160.0	78.0	79.2	2430.0	95.8	97.1		
28	1960.0	0.0	0.0	2240.0	77.5	78.8	2520.0	96.9	98.2		
29	2030.0	0.0	0.0	2320.0	77.1	78.4	2610.0	96.8	98.1		
30	2100.0	0.0	0.0	2400.0	76.5	77.8	2700.0	95.2	96.5		
31	2170.0	0.0	0.0	2480.0	76.1	77.4	2790.0	94.4	95.7		
32	2240.0	0.0	0.0	2560.0	75.5	76.8	2880.0	94.9	96.1		
33	2310.0	0.0	0.0	2640.0	74.6	75.9	2970.0	95.2	96.4		
34	2380.0	0.0	0.0	2720.0	74.2	75.5	3060.0	94.0	95.2		
35	2450.0	0.0	0.0	2800.0	73.5	74.8	3150.0	90.8	92.0		
36	2520.0	0.0	0.0	2880.0	72.8	74.0	3240.0	91.6	92.8		
37	2590.0	0.0	0.0	2960.0	72.2	73.4	3330.0	92.8	94.0		
38	2660.0	0.0	0.0	3040.0	71.6	72.8	3420.0	91.3	92.5		
39	2730.0	0.0	0.0	3120.0	70.9	72.1	3510.0	88.1	89.3		
40	2800.0	0.0	0.0	3200.0	69.8	71.0	3600.0	89.4	90.4		
OASPL		111.2	95.3			118.1	109.0			126.2	123.9

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
EN-1 / 163				EN-2 / 164				EN-3 / 165		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	111.1	84.9	80.0	117.1	94.6	90.0	117.7	98.6	
2	140.0	105.9	89.8	160.0	111.6	98.2	180.0	115.5	104.6	
3	210.0	100.3	89.4	240.0	111.5	102.9	270.0	116.4	107.8	
4	280.0	98.4	89.8	320.0	108.8	102.2	360.0	115.1	110.3	
5	350.0	92.5	85.9	400.0	105.5	100.7	450.0	115.6	112.4	
6	420.0	88.9	84.1	480.0	103.6	100.4	540.0	113.5	110.3	
7	490.0	83.6	80.4	560.0	101.4	98.2	630.0	114.8	112.9	
8	560.0	80.3	77.1	640.0	100.0	98.1	720.0	112.9	112.1	
9	630.0	76.6	74.7	720.0	95.8	95.0	810.0	112.0	111.2	
10	700.0	70.5	68.6	800.0	94.4	93.6	900.0	112.5	112.5	
11	770.0	62.4	61.6	880.0	92.1	91.3	990.0	110.4	110.4	
12	840.0	0.0	0.0	960.0	88.5	88.5	1080.0	109.7	109.7	
13	910.0	0.0	0.0	1040.0	87.0	87.0	1170.0	109.5	110.1	
14	980.0	0.0	0.0	1120.0	85.2	85.2	1260.0	106.5	107.1	
15	1050.0	0.0	0.0	1200.0	81.3	81.9	1350.0	106.5	107.1	
16	1120.0	0.0	0.0	1280.0	77.4	78.0	1440.0	105.6	106.6	
17	1190.0	0.0	0.0	1360.0	76.9	77.5	1530.0	103.3	104.3	
18	1260.0	0.0	0.0	1440.0	74.3	75.3	1620.0	101.1	102.1	
19	1330.0	0.0	0.0	1520.0	71.1	72.1	1710.0	102.5	103.5	
20	1400.0	0.0	0.0	1600.0	67.7	68.7	1800.0	100.9	102.1	
21	1470.0	0.0	0.0	1680.0	65.2	66.2	1890.0	96.9	98.1	
22	1540.0	0.0	0.0	1760.0	64.5	65.5	1980.0	97.7	98.9	
23	1610.0	0.0	0.0	1840.0	59.6	60.8	2070.0	96.7	97.9	
24	1680.0	0.0	0.0	1920.0	59.1	60.3	2160.0	93.6	94.8	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	94.4	95.7	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	92.8	94.1	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	92.2	93.5	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	92.7	94.0	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	92.0	93.3	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	90.9	92.2	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	90.0	91.3	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	89.3	90.5	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	88.1	89.3	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	85.8	87.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	87.4	88.6	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	86.4	87.6	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	83.4	84.6	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	84.9	86.1	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	83.7	84.9	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	81.8	82.8	
OASPL										
112.8				119.9				125.6		

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
EN-1 / 163				EN-2 / 164			EN-3 / 165			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	112.3	86.1	80.0	118.9	96.4	90.0	119.5	100.4	
2	140.0	107.0	90.9	160.0	112.5	99.1	180.0	116.3	105.4	
3	210.0	98.4	87.5	240.0	109.3	100.7	270.0	117.5	108.9	
4	280.0	96.8	88.2	320.0	111.5	104.9	360.0	119.6	114.8	
5	350.0	94.2	87.6	400.0	106.2	101.4	450.0	111.0	107.8	
6	420.0	85.4	80.6	480.0	98.6	95.4	540.0	112.7	109.5	
7	490.0	79.0	75.8	560.0	100.4	97.2	630.0	113.0	111.1	
8	560.0	77.5	74.3	640.0	97.7	95.8	720.0	108.2	107.4	
9	630.0	72.1	70.2	720.0	92.6	91.8	810.0	108.5	107.7	
10	700.0	64.2	62.3	800.0	89.2	88.4	900.0	107.6	107.6	
11	770.0	52.5	51.7	880.0	88.0	87.2	990.0	106.6	106.6	
12	840.0	0.0	0.0	960.0	86.6	86.6	1080.0	104.6	104.6	
13	910.0	0.0	0.0	1040.0	83.1	83.1	1170.0	103.3	103.9	
14	980.0	0.0	0.0	1120.0	78.3	78.3	1260.0	102.9	103.5	
15	1050.0	0.0	0.0	1200.0	75.9	76.5	1350.0	100.5	101.1	
16	1120.0	0.0	0.0	1280.0	73.9	74.5	1440.0	98.7	99.7	
17	1190.0	0.0	0.0	1360.0	66.1	66.7	1530.0	97.9	98.9	
18	1260.0	0.0	0.0	1440.0	63.5	64.5	1620.0	95.5	96.5	
19	1330.0	0.0	0.0	1520.0	61.2	62.2	1710.0	93.2	94.2	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	92.7	93.9	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	91.1	92.3	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	88.9	90.1	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	91.2	92.4	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	86.7	87.9	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	84.8	86.1	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	85.7	87.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	80.0	81.3	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	83.8	85.1	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	76.8	78.1	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	78.9	80.2	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	81.1	82.4	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	71.7	72.9	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
CASPL		113.7	95.6		121.0	109.3		125.6	120.2	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN											
EN-1 / 163				EN-2 / 164				EN-3 / 165			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	70.0	112.2	86.0	80.0	118.9	96.4	90.0	119.4	100.3		
2	140.0	105.2	89.1	160.0	111.0	97.6	180.0	114.6	103.7		
3	210.0	94.5	83.6	240.0	107.2	98.6	270.0	115.4	106.8		
4	280.0	94.0	85.4	320.0	107.3	100.7	360.0	112.8	108.0		
5	350.0	86.4	79.8	400.0	98.0	93.2	450.0	103.3	100.1		
6	420.0	73.7	68.9	480.0	92.5	89.3	540.0	109.2	106.0		
7	490.0	72.6	69.4	560.0	95.4	92.2	630.0	103.5	101.6		
8	560.0	73.5	70.3	640.0	89.1	87.2	720.0	98.6	97.8		
9	630.0	57.1	55.2	720.0	74.3	73.5	810.0	103.0	102.2		
10	700.0	0.0	0.0	800.0	83.7	82.9	900.0	95.1	95.1		
11	770.0	0.0	0.0	880.0	75.5	74.7	990.0	89.4	89.4		
12	840.0	0.0	0.0	960.0	59.3	59.3	1080.0	93.8	93.8		
13	910.0	0.0	0.0	1040.0	0.0	0.0	1170.0	86.6	87.2		
14	980.0	0.0	0.0	1120.0	0.0	0.0	1260.0	81.8	82.4		
15	1050.0	0.0	0.0	1200.0	0.0	0.0	1350.0	84.6	85.2		
16	1120.0	0.0	0.0	1280.0	0.0	0.0	1440.0	79.9	80.9		
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	58.3	59.3		
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	75.8	76.8		
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	80.7	81.7		
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	74.3	75.5		
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	71.6	72.8		
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	66.6	67.8		
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0		
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0		
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0		
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0		
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0		
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0		
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0		
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0		
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0		
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0		
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0		
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0		
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0		
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0		
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0		
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0		
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0		
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0		
OASPL		113.1	92.8			120.1	105.4			122.7	113.8

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN										
EN-1 / 163			EN-2 / 164			EN-3 / 165				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	109.6	83.4	80.0	114.2	91.7	90.0	119.6	100.5	
2	140.0	96.5	80.4	160.0	103.8	90.4	180.0	114.3	103.4	
3	210.0	86.4	75.5	240.0	99.3	90.7	270.0	100.6	92.0	
4	280.0	74.0	65.4	320.0	92.6	86.0	360.0	104.5	99.7	
5	350.0	0.0	0.0	400.0	78.0	73.2	450.0	97.7	94.5	
6	420.0	0.0	0.0	480.0	71.7	68.5	540.0	90.8	87.6	
7	490.0	0.0	0.0	560.0	0.0	0.0	630.0	0.0	0.0	
8	560.0	0.0	0.0	640.0	0.0	0.0	720.0	0.0	0.0	
9	630.0	0.0	0.0	720.0	0.0	0.0	810.0	0.0	0.0	
10	700.0	0.0	0.0	800.0	0.0	0.0	900.0	0.0	0.0	
11	770.0	0.0	0.0	880.0	0.0	0.0	990.0	0.0	0.0	
12	840.0	0.0	0.0	960.0	0.0	0.0	1080.0	0.0	0.0	
13	910.0	0.0	0.0	1040.0	0.0	0.0	1170.0	0.0	0.0	
14	980.0	0.0	0.0	1120.0	0.0	0.0	1260.0	0.0	0.0	
15	1050.0	0.0	0.0	1200.0	0.0	0.0	1350.0	0.0	0.0	
16	1120.0	0.0	0.0	1280.0	0.0	0.0	1440.0	0.0	0.0	
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	0.0	0.0	
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	0.0	0.0	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	0.0	0.0	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	0.0	0.0	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	0.0	0.0	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		109.9	85.7		114.8	96.2		120.9	106.7	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 8 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN											
EN-1 / 163				EN-2 / 164			EN-3 / 165				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	70.0	107.7	81.5	80.0	114.8	92.3	90.0	112.1	93.0		
2	140.0	104.9	88.8	160.0	111.2	97.8	180.0	113.9	103.0		
3	210.0	100.0	89.1	240.0	110.4	101.8	270.0	113.5	104.9		
4	280.0	95.8	87.2	320.0	107.7	101.1	360.0	113.4	108.6		
5	350.0	90.8	84.2	400.0	105.3	100.5	450.0	112.8	109.6		
6	420.0	87.8	83.0	480.0	102.1	98.9	540.0	112.9	109.7		
7	490.0	83.8	80.6	560.0	100.0	96.8	630.0	112.5	110.6		
8	560.0	78.7	75.5	640.0	98.0	96.1	720.0	111.8	111.0		
9	630.0	0.0	0.0	720.0	95.9	95.1	810.0	111.1	110.3		
10	700.0	0.0	0.0	800.0	93.4	92.6	900.0	109.3	109.3		
11	770.0	0.0	0.0	880.0	90.6	89.8	990.0	108.5	108.5		
12	840.0	0.0	0.0	960.0	87.4	87.4	1080.0	107.4	107.4		
13	910.0	0.0	0.0	1040.0	84.5	84.5	1170.0	106.2	106.8		
14	980.0	0.0	0.0	1120.0	82.8	82.8	1260.0	104.9	105.5		
15	1050.0	0.0	0.0	1200.0	79.6	80.2	1350.0	104.0	104.6		
16	1120.0	0.0	0.0	1280.0	77.4	78.0	1440.0	102.5	103.5		
17	1190.0	0.0	0.0	1360.0	74.7	75.3	1530.0	100.9	101.9		
18	1260.0	0.0	0.0	1440.0	73.0	74.0	1620.0	100.2	101.2		
19	1330.0	0.0	0.0	1520.0	69.5	70.5	1710.0	98.5	99.5		
20	1400.0	0.0	0.0	1600.0	65.2	66.2	1800.0	97.6	98.8		
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	96.7	97.9		
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	95.0	96.2		
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	94.3	95.5		
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	92.4	93.6		
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	90.6	91.9		
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	90.2	91.5		
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	88.8	90.1		
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	88.7	90.0		
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	87.5	88.8		
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	87.6	88.9		
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	85.9	87.2		
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	85.6	86.8		
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	84.3	85.5		
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	83.4	84.6		
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	83.3	84.5		
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	81.2	82.4		
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	81.4	82.6		
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	80.5	81.7		
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	78.4	79.6		
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	78.0	79.0		
OASPL		110.2	94.5			118.3	108.5			123.2	120.3

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN											
EN-1 / 163				EN-2 / 164			EN-3 / 165				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	70.0	109.6	83.4	80.0	114.2	91.7	90.0	119.6	100.5		
2	140.0	96.5	80.4	160.0	103.8	90.4	180.0	114.3	103.4		
3	210.0	86.4	75.5	240.0	99.3	90.7	270.0	100.6	92.0		
4	280.0	74.0	65.4	320.0	92.6	86.0	360.0	104.5	99.7		
5	350.0	0.0	0.0	400.0	78.0	73.2	450.0	97.7	94.5		
6	420.0	0.0	0.0	480.0	71.7	68.5	540.0	90.8	87.6		
7	490.0	0.0	0.0	560.0	0.0	0.0	630.0	0.0	0.0		
8	560.0	0.0	0.0	640.0	0.0	0.0	720.0	0.0	0.0		
9	630.0	0.0	0.0	720.0	0.0	0.0	810.0	0.0	0.0		
10	700.0	0.0	0.0	800.0	0.0	0.0	900.0	0.0	0.0		
11	770.0	0.0	0.0	880.0	0.0	0.0	990.0	0.0	0.0		
12	840.0	0.0	0.0	960.0	0.0	0.0	1080.0	0.0	0.0		
13	910.0	0.0	0.0	1040.0	0.0	0.0	1170.0	0.0	0.0		
14	980.0	0.0	0.0	1120.0	0.0	0.0	1260.0	0.0	0.0		
15	1050.0	0.0	0.0	1200.0	0.0	0.0	1350.0	0.0	0.0		
16	1120.0	0.0	0.0	1280.0	0.0	0.0	1440.0	0.0	0.0		
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	0.0	0.0		
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	0.0	0.0		
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	0.0	0.0		
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	0.0	0.0		
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	0.0	0.0		
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0		
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0		
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0		
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0		
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0		
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0		
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0		
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0		
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0		
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0		
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0		
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0		
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0		
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0		
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0		
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0		
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0		
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0		
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0		
OASPL		109.9	85.7			114.8	96.2			120.9	106.7

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 8 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN											
EN-1 / 163				EN-2 / 164				EN-3 / 165			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	70.0	107.7	81.5	80.0	114.8	92.3	90.0	112.1	93.0		
2	140.0	104.9	88.8	160.0	111.2	97.8	180.0	113.9	103.0		
3	210.0	100.0	89.1	240.0	110.4	101.8	270.0	113.5	104.9		
4	280.0	95.8	87.2	320.0	107.7	101.1	360.0	113.4	108.6		
5	350.0	90.8	84.2	400.0	105.3	100.5	450.0	112.8	109.6		
6	420.0	87.8	83.0	480.0	102.1	98.9	540.0	112.9	109.7		
7	490.0	83.8	80.6	560.0	100.0	96.8	630.0	112.5	110.6		
8	560.0	78.7	75.5	640.0	98.0	96.1	720.0	111.8	111.0		
9	630.0	0.0	0.0	720.0	95.9	95.1	810.0	111.1	110.3		
10	700.0	0.0	0.0	800.0	93.4	92.6	900.0	109.3	109.3		
11	770.0	0.0	0.0	880.0	90.6	89.8	990.0	108.5	108.5		
12	840.0	0.0	0.0	960.0	87.4	87.4	1080.0	107.4	107.4		
13	910.0	0.0	0.0	1040.0	84.5	84.5	1170.0	106.2	106.8		
14	980.0	0.0	0.0	1120.0	82.8	82.8	1260.0	104.9	105.5		
15	1050.0	0.0	0.0	1200.0	79.6	80.2	1350.0	104.0	104.6		
16	1120.0	0.0	0.0	1280.0	77.4	78.0	1440.0	102.5	103.5		
17	1190.0	0.0	0.0	1360.0	74.7	75.3	1530.0	100.9	101.9		
18	1260.0	0.0	0.0	1440.0	73.0	74.0	1620.0	100.2	101.2		
19	1330.0	0.0	0.0	1520.0	69.5	70.5	1710.0	98.5	99.5		
20	1400.0	0.0	0.0	1600.0	65.2	66.2	1800.0	97.6	98.8		
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	96.7	97.9		
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	95.0	96.2		
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	94.3	95.5		
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	92.4	93.6		
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	90.6	91.9		
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	90.2	91.5		
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	88.8	90.1		
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	88.7	90.0		
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	87.5	88.8		
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	87.6	88.9		
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	85.9	87.2		
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	85.6	86.8		
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	84.3	85.5		
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	83.4	84.6		
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	83.3	84.5		
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	81.2	82.4		
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	81.4	82.6		
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	80.5	81.7		
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	78.4	79.6		
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	78.0	79.0		
OASPL		110.2	94.5		118.3	108.5		123.2	120.3		

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 (PITCH ANGLE: 19.9 DEG)

DATA-POINT / RUN											
EN-1 / 163				EN-2 / 164				EN-3 / 165			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	70.0	107.8	81.6	80.0	115.0	92.5	90.0	114.8	95.7		
2	140.0	105.4	89.3	160.0	108.9	95.5	180.0	110.8	99.9		
3	210.0	94.7	83.8	240.0	108.0	99.4	270.0	117.3	108.7		
4	280.0	98.2	89.6	320.0	108.7	102.1	360.0	114.2	109.4		
5	350.0	93.8	87.2	400.0	101.5	96.7	450.0	111.5	108.3		
6	420.0	84.4	79.6	480.0	100.6	97.4	540.0	115.0	111.8		
7	490.0	81.1	77.9	560.0	101.4	98.2	630.0	110.6	108.7		
8	560.0	81.8	78.6	640.0	96.2	94.3	720.0	111.1	110.3		
9	630.0	76.2	74.3	720.0	91.5	90.7	810.0	111.9	111.1		
10	700.0	69.0	67.1	800.0	93.7	92.9	900.0	106.5	106.5		
11	770.0	0.0	0.0	880.0	87.6	86.8	990.0	108.4	108.4		
12	840.0	0.0	0.0	960.0	84.4	84.4	1080.0	108.1	108.1		
13	910.0	0.0	0.0	1040.0	85.4	85.4	1170.0	105.9	106.5		
14	980.0	0.0	0.0	1120.0	80.3	80.3	1260.0	104.1	104.7		
15	1050.0	0.0	0.0	1200.0	80.1	80.7	1350.0	105.2	105.8		
16	1120.0	0.0	0.0	1280.0	74.9	75.5	1440.0	103.0	104.0		
17	1190.0	0.0	0.0	1360.0	71.9	72.5	1530.0	99.8	100.8		
18	1260.0	0.0	0.0	1440.0	73.0	74.0	1620.0	102.1	103.1		
19	1330.0	0.0	0.0	1520.0	68.1	69.1	1710.0	98.3	99.3		
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	98.0	99.2		
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	98.4	99.6		
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	94.4	95.6		
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	96.2	97.4		
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	96.6	97.8		
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	86.7	88.0		
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	95.4	96.7		
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	91.7	93.0		
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	89.2	90.5		
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	91.8	93.1		
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	88.1	89.4		
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	88.5	89.8		
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	88.8	90.0		
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	86.8	88.0		
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	87.3	88.5		
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	86.6	87.8		
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	87.4	88.6		
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	82.0	83.2		
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	86.9	88.1		
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	85.0	86.2		
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	78.4	79.4		
OASPL		110.3	94.7			117.6	107.4			123.7	120.4

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
EN-4 / 160				EN-5 / 161			EN-6 / 162			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	103.8	77.6	70.0	106.9	80.7	80.0	109.6	87.1	
2	120.0	93.5	77.4	140.0	97.7	81.6	160.0	107.6	94.2	
3	180.0	85.4	74.5	210.0	97.0	86.1	240.0	106.9	98.3	
4	240.0	81.5	72.9	280.0	91.9	83.3	320.0	104.1	97.5	
5	300.0	66.4	59.8	350.0	85.8	79.2	400.0	102.2	97.4	
6	360.0	68.3	63.5	420.0	84.2	79.4	480.0	98.2	95.0	
7	420.0	62.1	57.3	490.0	76.7	73.5	560.0	93.7	90.5	
8	480.0	56.2	53.0	560.0	68.9	65.7	640.0	93.7	91.8	
9	540.0	0.0	0.0	630.0	69.4	67.5	720.0	91.1	90.3	
10	600.0	0.0	0.0	700.0	63.0	61.1	800.0	87.9	87.1	
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	85.0	84.2	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	82.6	82.6	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	80.2	80.2	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	74.8	74.8	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	69.2	69.8	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	67.6	68.2	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	66.4	67.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	63.8	64.8	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	63.3	64.3	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		104.2	82.1		107.9	90.4		114.0	104.6	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
EN-4 / 160				EN-5 / 161				EN-6 / 162		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	105.1	78.9	70.0	110.2	84.0	80.0	112.4	89.9	
2	120.0	99.4	83.3	140.0	105.5	89.4	160.0	112.7	99.3	
3	180.0	93.9	83.0	210.0	101.9	91.0	240.0	110.5	101.9	
4	240.0	86.1	77.5	280.0	98.1	89.5	320.0	107.4	100.8	
5	300.0	80.4	73.8	350.0	93.0	86.4	400.0	106.5	101.7	
6	360.0	71.5	66.7	420.0	89.9	85.1	480.0	105.5	102.3	
7	420.0	70.4	65.6	490.0	87.6	84.4	560.0	102.4	99.2	
8	480.0	68.8	65.6	560.0	78.8	75.6	640.0	100.2	98.3	
9	540.0	0.0	0.0	630.0	78.1	76.2	720.0	96.7	95.9	
10	600.0	0.0	0.0	700.0	71.4	69.5	800.0	96.4	95.6	
11	660.0	0.0	0.0	770.0	67.7	66.9	880.0	94.8	94.0	
12	720.0	0.0	0.0	840.0	64.3	63.5	960.0	91.9	91.9	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	88.5	88.5	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	86.1	86.1	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	84.5	85.1	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	82.1	82.7	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	80.0	80.6	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	75.7	76.7	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	74.0	75.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	71.0	72.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	67.0	68.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	67.1	68.1	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	61.5	62.7	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		106.4	87.7		112.2	96.4		118.1	109.9	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
EN-4 / 160				EN-5 / 161			EN-6 / 162			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	107.3	81.1	70.0	112.2	86.0	80.0	115.3	92.8	
2	120.0	100.8	84.7	140.0	108.3	92.2	160.0	113.5	100.1	
3	180.0	94.1	83.2	210.0	103.8	92.9	240.0	112.4	103.8	
4	240.0	87.4	78.8	280.0	99.3	90.7	320.0	109.5	102.9	
5	300.0	77.4	70.8	350.0	94.3	87.7	400.0	109.3	104.5	
6	360.0	78.5	73.7	420.0	93.3	88.5	480.0	106.0	102.8	
7	420.0	71.4	66.6	490.0	87.1	83.9	560.0	102.1	98.9	
8	480.0	53.8	50.6	560.0	83.6	80.4	640.0	101.6	99.7	
9	540.0	0.0	0.0	630.0	75.9	74.0	720.0	100.4	99.6	
10	600.0	0.0	0.0	700.0	75.1	73.2	800.0	97.0	96.2	
11	660.0	0.0	0.0	770.0	68.8	68.0	880.0	95.4	94.6	
12	720.0	0.0	0.0	840.0	63.5	62.7	960.0	93.8	93.8	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	91.2	91.2	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	87.0	87.0	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	85.8	86.4	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	84.8	85.4	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	81.0	81.6	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	78.2	79.2	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	74.5	75.5	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	73.8	74.8	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	70.4	71.4	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	67.4	68.4	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	62.9	64.1	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		108.4	88.7			114.4	98.4			120.0 111.5

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
EN-4 / 160				EN-5 / 161				EN-6 / 162			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	108.9	82.7	70.0	114.0	87.8	80.0	118.0	95.5		
2	120.0	101.9	85.8	140.0	109.6	93.5	160.0	113.3	99.9		
3	180.0	95.0	84.1	210.0	103.7	92.8	240.0	113.4	104.8		
4	240.0	88.3	79.7	280.0	102.2	93.6	320.0	110.8	104.2		
5	300.0	78.5	71.9	350.0	96.3	89.7	400.0	107.8	103.0		
6	360.0	74.9	70.1	420.0	90.5	85.7	480.0	105.2	102.0		
7	420.0	73.2	68.4	490.0	86.2	83.0	560.0	103.6	100.4		
8	480.0	71.3	68.1	560.0	79.4	76.2	640.0	101.9	100.0		
9	540.0	0.0	0.0	630.0	78.8	76.9	720.0	98.0	97.2		
10	600.0	0.0	0.0	700.0	70.0	68.1	800.0	95.8	95.0		
11	660.0	0.0	0.0	770.0	73.1	72.3	880.0	93.9	93.1		
12	720.0	0.0	0.0	840.0	62.4	61.6	960.0	89.9	89.9		
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	88.9	88.9		
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	86.8	86.8		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	83.4	84.0		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	78.7	79.3		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	78.3	78.9		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	74.5	75.5		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	72.6	73.6		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	68.4	69.4		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	61.6	62.6		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		109.9	89.8			115.9	99.4			121.2	111.4

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
EN-4 / 160				EN-5 / 161				EN-6 / 162			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	109.9	83.7	70.0	115.2	89.0	80.0	120.1	97.6		
2	120.0	102.7	86.6	140.0	110.5	94.4	160.0	114.1	100.7		
3	180.0	93.2	82.3	210.0	101.5	90.6	240.0	111.4	102.8		
4	240.0	83.8	75.2	280.0	100.9	92.3	320.0	113.6	107.0		
5	300.0	78.6	72.0	350.0	98.0	91.4	400.0	107.7	102.9		
6	360.0	78.4	73.6	420.0	90.6	85.8	480.0	102.1	98.9		
7	420.0	56.2	51.4	490.0	82.8	79.6	560.0	102.6	99.4		
8	480.0	0.0	0.0	560.0	81.4	78.2	640.0	100.1	98.2		
9	540.0	0.0	0.0	630.0	71.7	69.8	720.0	93.6	92.8		
10	600.0	0.0	0.0	700.0	68.4	66.5	800.0	90.4	89.6		
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	89.1	88.3		
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	88.1	88.1		
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	83.9	83.9		
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	78.9	78.9		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	78.4	79.0		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	77.1	77.7		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	70.0	70.6		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	67.9	68.9		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		110.7	89.7		116.8	99.2		122.5	111.3		

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

M. CROPHONE: MP 6 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
EN-4 / 160				EN-5 / 161				EN-6 / 162			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	109.7	83.5	70.0	115.8	89.6	80.0	120.9	98.4		
2	120.0	101.5	85.4	140.0	108.6	92.5	160.0	112.8	99.4		
3	180.0	89.5	78.6	210.0	98.3	87.4	240.0	109.7	101.1		
4	240.0	80.7	72.1	280.0	97.9	89.3	320.0	109.6	103.0		
5	300.0	79.6	73.0	350.0	90.6	84.0	400.0	100.2	95.4		
6	360.0	70.4	65.6	420.0	79.9	75.1	480.0	95.3	92.1		
7	420.0	63.6	58.8	490.0	74.8	71.6	560.0	97.6	94.4		
8	480.0	0.0	0.0	560.0	76.0	72.8	640.0	91.0	89.1		
9	540.0	0.0	0.0	630.0	65.0	63.1	720.0	77.0	76.2		
10	600.0	0.0	0.0	700.0	59.7	57.8	800.0	86.4	85.6		
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	79.8	79.0		
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	68.4	68.4		
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	0.0	0.0		
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	0.0	0.0		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		110.3	88.3			116.7	96.4			122.1	107.6

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
EN-4 / 160				EN-5 / 161				EN-6 / 162			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	106.9	80.7	70.0	113.8	87.6	80.0	116.3	93.8		
2	120.0	91.3	75.2	140.0	100.1	84.0	160.0	104.8	91.4		
3	180.0	81.0	70.1	210.0	88.8	77.9	240.0	101.0	92.4		
4	240.0	71.4	62.8	280.0	79.6	71.0	320.0	92.8	86.2		
5	300.0	69.3	62.7	350.0	72.0	65.4	400.0	86.0	81.2		
6	360.0	0.0	0.0	420.0	76.2	71.4	480.0	78.9	75.7		
7	420.0	0.0	0.0	490.0	71.2	68.0	560.0	74.4	71.2		
8	480.0	0.0	0.0	560.0	67.1	63.9	640.0	72.9	71.0		
9	540.0	0.0	0.0	630.0	66.1	64.2	720.0	71.7	70.9		
10	600.0	0.0	0.0	700.0	0.0	0.0	800.0	71.4	70.6		
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	0.0	0.0		
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	0.0	0.0		
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	0.0	0.0		
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	0.0	0.0		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		107.0	82.2			114.0	89.7			116.7	97.9

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 8 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN											
EN-4 / 160				EN-5 / 161			EN-6 / 162				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	106.9	80.7	70.0	111.0	84.8	80.0	115.1	92.6		
2	120.0	100.2	84.1	140.0	108.5	92.4	160.0	112.5	99.1		
3	180.0	92.7	81.8	210.0	103.7	92.8	240.0	111.2	102.6		
4	240.0	86.5	77.9	280.0	99.9	91.3	320.0	108.6	102.0		
5	300.0	81.9	75.3	350.0	93.9	87.3	400.0	106.4	101.6		
6	360.0	73.7	68.9	420.0	90.9	86.1	480.0	103.6	100.4		
7	420.0	0.0	0.0	490.0	87.4	84.2	560.0	101.2	98.0		
8	480.0	0.0	0.0	560.0	82.6	79.4	640.0	99.3	97.4		
9	540.0	0.0	0.0	630.0	76.3	74.4	720.0	97.2	96.4		
10	600.0	0.0	0.0	700.0	75.6	73.7	800.0	95.4	94.6		
11	660.0	0.0	0.0	770.0	71.9	71.1	880.0	91.7	90.9		
12	720.0	0.0	0.0	840.0	62.3	61.5	960.0	89.7	89.7		
13	780.0	0.0	0.0	910.0	60.1	60.1	1040.0	86.9	86.9		
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	84.3	84.3		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	81.9	82.5		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	79.0	79.6		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	78.0	78.6		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	73.3	74.3		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0		
OASPL		107.9	88.0			113.7	98.2			119.1	109.6

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 (PITCH ANGLE: 23.7 DEG)

DATA-POINT / RUN										
EN-4 / 160				EN-5 / 161				EN-6 / 162		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	107.5	81.3	70.0	111.4	85.2	80.0	116.8	94.3	
2	120.0	100.7	84.6	140.0	107.1	91.0	160.0	111.5	98.1	
3	180.0	91.6	80.7	210.0	97.3	86.4	240.0	110.3	101.7	
4	240.0	82.3	73.7	280.0	101.5	92.9	320.0	110.8	104.2	
5	300.0	81.3	74.7	350.0	97.2	90.6	400.0	103.2	98.4	
6	360.0	74.8	70.0	420.0	87.7	82.9	480.0	102.6	99.4	
7	420.0	65.7	60.9	490.0	85.2	82.0	560.0	103.2	100.0	
8	480.0	0.0	0.0	560.0	85.6	82.4	640.0	98.0	96.1	
9	540.0	0.0	0.0	630.0	78.1	76.2	720.0	94.8	94.0	
10	600.0	0.0	0.0	700.0	75.6	73.7	800.0	96.1	95.3	
11	660.0	0.0	0.0	770.0	71.1	70.3	880.0	90.2	89.4	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	87.8	87.8	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	89.5	89.5	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	85.7	85.7	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	80.4	81.0	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	78.7	79.3	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	79.1	79.7	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	75.8	76.8	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	65.2	66.2	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		108.4	87.8			113.3	97.6			119.7 109.5

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

7. Comments on Data Interpretation

In the preceeding chapters acoustic as-measured data are presented in terms of pressure-time histories and narrow-band spectra for all microphone positions MP 1 to MP 9*.

As stated in the "Executive Report" to this Appendix all data have been analysed regardless of occasional microphone drop-outs or the occurrence of external pressure disturbances which may distort the propeller noise-signature completely.

To avoid erroneous data interpretation, the following list summarizes all those data-points (within the total test-program) which should be deleted with respect to the microphone position indicated:

Microphone Position MP 3:

Delete analyses of Data Points BC-4
 BC-5.

Microphone Position MP 6:

Subprogram	Delete analyses of Data Points
Basic Program	AN-1,2,3,4,5,7; BN-1,2,3,4,5,6,61,7 BC-1,2,3,4,5,6,61,7
Temperature Effect	HN-3; IN-1,2,3; JN-1,2,3; KN-1,2 HC-1,2; IC-1,2,3;
Attitude Effect	-
Installation Effect	FNC-7,8,9,10,11,12

* MP 8 has only been analysed for data points within the "Attitude-effect" test-program.

In addition, noise data acquired at microphone position MP 7 should be interpreted with care for such data-points which combine low propeller rotational speeds with high tunnel flow-velocities. Respective data are often disturbed due to the effects of microphone vibration. In each of these cases the respective averaged pressure-time history and the corresponding level-spectrum should be inspected carefully. If both data representations do not exhibit any periodic behaviour the respective analysis should not be interpreted.

On top of the averaged pressure-time history plot the number of averages as well as the magnitude of "disturbance-pressure-amplitudes" (which have been detected and deleted within the analysed time-interval) are indicated, the latter by ΔP . In case of completely distorted propeller noise signatures, ΔP generally assumes values of 496% (referenced to the minimum peak-to-peak pressure amplitude within the total number of propeller revolutions analysed). If even higher disturbance amplitudes occur, respective data analyses are marked by $\Delta P > ***$ and should be deleted. Lists of harmonic levels in this case often contain just one level-value for the fundamental frequency ($HN=1$) which then however has no physical meaning.

Therefore, data interpretation should not be solely based on the listing of harmonic levels. In particular, if only one harmonic level at $HN=1$ is listed, a careful inspection of the respective level-spectrum (as calculated from the averaged time-history) is necessary to ensure the physical relevance of this harmonic level.

END

1-87

DTIC